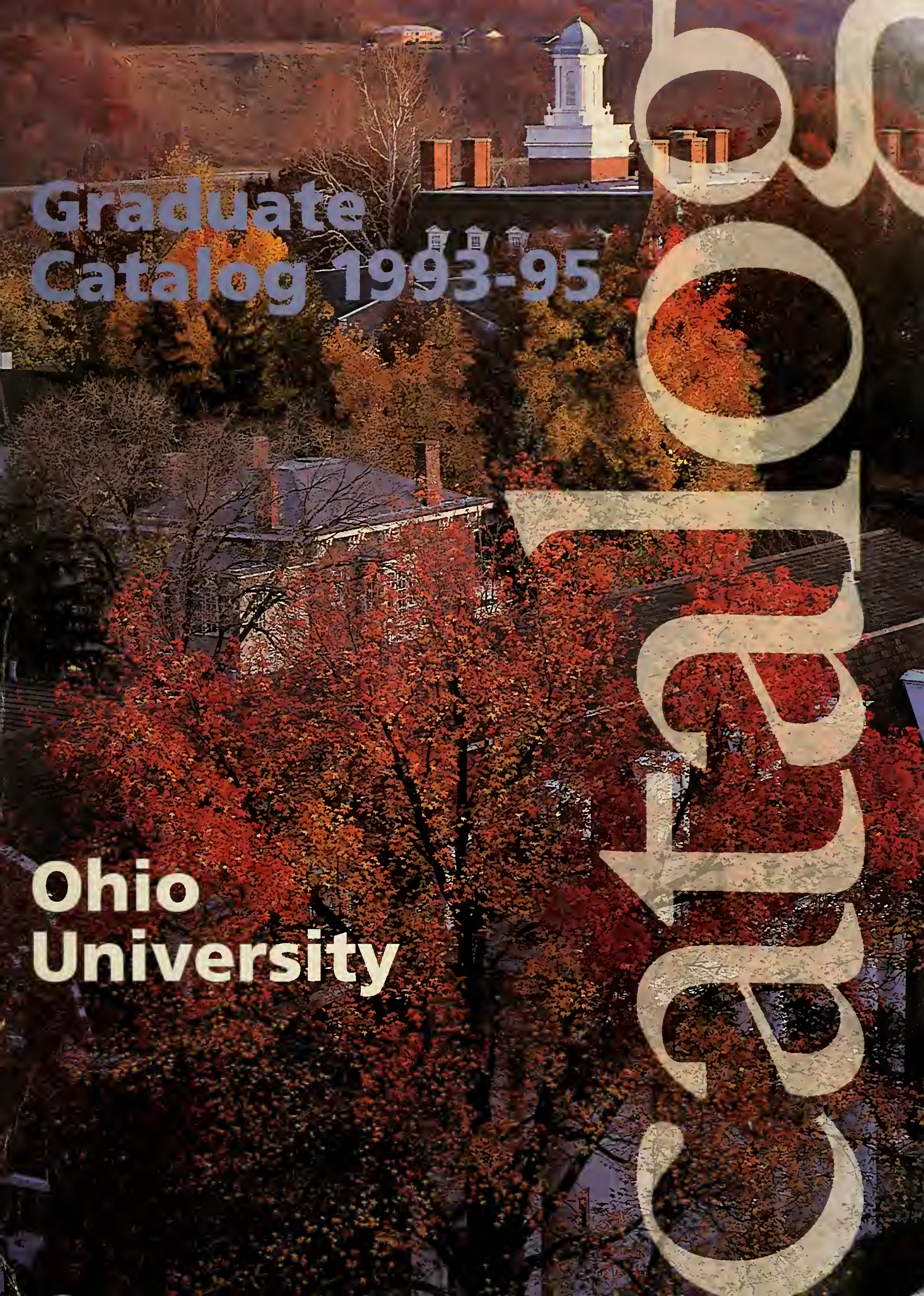

Graduate Catalog 1993-95

Ohio University

Academic Calendar

• Fall Quarter, 1994

Sept. 7	*Wed.*	Registration day.
Sept. 8	*Thu.*	Classes begin - Athens and regional campuses.
Nov. 11	*Fri.*	Veteran's Day (University offices officially closed; classes in session).
Nov. 16	*Wed.*	Last day of classes.
Nov. 18	*Fri.*	Examinations begin.
Nov. 23	*Wed.*	Quarter closing date.

• Winter Quarter, 1995

Jan. 4	*Wed.*	Registration day.
		Classes begin - Athens and regional campuses.
Jan. 16	*Mon.*	Martin Luther King Day (All University offices open; classes not in session.)
Mar. 13	*Mon.*	Last day of classes.
Mar. 14	*Tue.*	Examinations begin.
Mar. 18	*Sat.*	Quarter closing date.

• Spring Quarter, 1995

Mar. 27	*Mon.*	Registration day.
		Classes begin - Athens and regional campuses.
May 29	*Mon.*	Memorial Day (University offices officially closed; classes not in session).
June 3	*Sat.*	Last day of classes.
June 5	*Mon.*	Examinations begin.
June 9	*Fri.*	Annual Graduate Commencement.
June 10	*Sat.*	Quarter closing date.

• Summer Quarter, 1995

First Term

June 12	*Mon.*	Registration day - classes begin.
July 4	*Tue.*	Independence Day (University offices officially closed; classes not in session).
July 14	*Fri.*	Last day of classes; examinations.
July 15	*Sat.*	Term closing date.

Second Term

July 17	*Mon.*	Registration day - classes begin.
Aug. 18	*Fri.*	Last day of classes; examinations.
Aug. 19	*Sat.*	Quarter closing date.

• Fall Quarter, 1995

Sept. 6	*Wed.*	Registration day.
Sept. 7	*Thu.*	Classes begin - Athens and regional campuses.
Nov. 10	*Fri.*	Veteran's Day (University offices officially closed; classes in session).
Nov. 15	*Wed.*	Last day of classes.
Nov. 16	*Thu.*	Examinations begin.
Nov. 22	*Wed.*	Quarter closing date.

• Winter Quarter, 1996

Jan. 3	*Wed.*	Registration day.
		Classes begin - Athens and regional campuses.
Jan. 15	*Mon.*	Martin Luther King Day (All University offices open; classes not in session.)
Mar. 9	*Sat.*	Last day of classes.
Mar. 11	*Mon.*	Examinations begin.
Mar. 16	*Sat.*	Quarter closing date.

• Spring Quarter, 1996

Mar. 25	*Mon.*	Registration day.
		Classes begin - Athens and regional campuses.
May 27	*Mon.*	Memorial Day (University offices officially closed; classes not in session).
June 1	*Sat.*	Last day of classes.
June 3	*Mon.*	Examinations begin.
June 7	*Fri.*	Annual Graduate Commencement.
June 8	*Sat.*	Quarter closing date.

• Summer Quarter, 1996

First Term

June 10	*Mon.*	Registration day - classes begin.
July 4	*Thu.*	Independence Day (University offices officially closed; classes not in session).
July 12	*Fri.*	Last day of classes; examinations.
July 13	*Sat.*	Term closing date.

Second Term

July 15	*Mon.*	Registration day - classes begin.
Aug. 16	*Fri.*	Last day of classes; examinations.
Aug. 17	*Sat.*	Quarter closing date.

Ohio University is an affirmative action institution.

Schedule of Academic Fees*

(per quarter)

Hours	Resident of Ohio	Nonresident
1	$ 178	$ 347
2	356	694
3	534	1,041
4	712	1,388
5	890	1,735
6	1,068	2,082
7	1,246	2,429
8	1,424	2,776
9-18	1,430	2,789

Auditors pay fees in full as above.

*Effective fall quarter 1994. Fees are subject to change without notice

Graduate Council

Jared Butcher, Ph.D.,	*Arts and Sciences*
Paul Dombrowski, Ph.D.,	*Arts and Sciences*
John Gay, Ph.D.,	*Health and Human Services*
Donald Fucci, Ph.D.,	*Health and Human Services*
Alonzo Hamby, Ph.D.,	*Arts and Sciences*
Darrell Huwe, Ph.D.,	*Arts and Sciences*
David Koonce, Ph.D.,	*Engineering and Technology*
Drew McDaniel, Ph.D.,	*Communication*
Don Miles, Ph.D.,	*Arts and Sciences*
Michael Mumper, Ph.D.,	*Arts and Sciences*
Edward Pieratt, M.A.,	*Communication*
Joan Safran, Ph.D.,	*Education*
James Scholten, Ed.D.,	*Fine Arts*
Constantine Vassiliadis, Ph.D.,	*Engineering and Technology*

An associate dean from each college and four graduate students also serve on the Graduate Council.

Ohio University

Graduate Catalog • 1993-95

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A graduate student must be registered in any quarter in which he or she is receiving any service from the University or using its facilities. A master's degree student must be registered for at least one graduate credit hour and a doctoral student for at least two graduate hours.

Direct Inquiries Concerning:

Admission information to the Office of Graduate Student Services, Ohio University, Athens OH 45701-2979; phone: 614-593-2800.

Continuing education, independent study, workshops, or conferences to the Office of Lifelong Learning, Tupper Hall; phone: 614-593-2890.

Curricula and degree requirements to the graduate chair of the department in question.

Graduate associateships and scholarships to the graduate chair of the department in question.

Housing to the Housing Office, Chubb Hall; phone 614-593-4090.

Osteopathic medicine to the College of Osteopathic Medicine, Grosvenor Hall; phone: 614-593-1800.

Registration, class schedules, and veteran's affairs to the Registrar's Office, Chubb Hall; phone 614-593-4191.

Campus mailing addresses are arranged as follows:

Office Name
Building or College
Ohio University
Athens OH 45701-2979

The University switchboard number is 614-593-1000.

Regional Campus Information:

Chillicothe Campus, 571 W. 5th St., Chillicothe OH 45601; phone: 614-774-7200.

Eastern Campus, 45245 National Road West, St. Clairsville OH 43950; phone: 614-695-1720.

Ironton Campus, 1804 Liberty Ave., Ironton OH 45638; phone: 614-533-4600.

Lancaster Campus, 1570 Granville Pike, Lancaster OH 43130; phone: 614-654-6711.

Zanesville Campus, 1425 Newark Rd., Zanesville OH 43701; phone: 614-453-0762.

The programs and requirements, general policies, regulations, calendar, and fees contained in this catalog are effective with the 1993 fall quarter. They are necessarily subject to change without notice at the discretion of Ohio University.

Ohio University Mission Statement

Ohio University is a public university providing a broad range of educational programs and services. As an academic community, Ohio University holds the intellectual and personal growth of the individual to be a central purpose. Its programs are designed to broaden perspectives, enrich awareness, deepen understanding, establish disciplined habits of thought, prepare for meaningful careers and, thus, to help develop individuals who are informed, responsible, productive citizens.

Undergraduate Education

Ohio University offers undergraduate instruction on both the Athens campus and the regional campuses. Undergraduate programs, designed to contribute to intellectual and personal development and career goals of students, emphasize liberal studies.

Undergraduate major programs, preprofessional, and professional programs prepare students for employment in a variety of careers and for continued study. Two-year technical and associate degree programs, reflecting employment opportunities, as well as the general career interests of students, are taught primarily at the regional campuses.

At the Athens campus, instruction is combined with residence life and other extracurricular programs in an effort to create a collegiate experience integrating learning and living.

Graduate and Professional Education

Ohio University offers graduate and professional education. The primary forms of activity are advanced and specialized courses of study, supervised practical experience, and research.

The essential concentration of faculty, material, and space resources dictates that the activity associated with graduate and professional education will be centered on the Athens campus. This activity is not limited to that campus; research and instruction are carried out at various locations.

Scholarship, Research, and Creative Activity

Ohio University is a center for scholarship, research, and creative activity involving the creation, testing, and dissemination of knowledge, understanding, expressions, and technique.

As a public university, Ohio University has a particular responsibility to address societal issues and needs through such scholarship, research, and creative activity. The scholarly and artistic activity of the faculty enhances the teaching function at all levels of the student experience.

Extended Community

Ohio University serves an extended community. The public service mission of the University, expressed in such activities as public broadcasting and continuing education programs, reflects the responsibility of the University to serve the ongoing educational needs of the region. The regional campuses perform a critical role in serving this extended community.

The University has state-wide responsibility for an extended university program using independent study through correspondence.

It is the purpose of these extended university programs to serve a diverse range of educational needs, from professional groups requiring continuing courses of study related to the practice of their professions, to individuals desiring occasional or special interest study.

By service to the extended community, Ohio University contributes to cultural and economic development, health care, and to other human services.

Adopted January 15, 1977; reaffirmed January, 1988.

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Ohio University Graduate Catalog

Each student assumes responsibility for knowing
current requirements for graduate programs
and for complying with current procedures.

◆ General Information

Ohio University was established in 1804 and was the first institution of higher education in the old Northwest Territory. The total enrollment on the main Athens campus is approximately 18,500, while the regional campuses enroll nearly 9,000. The present graduate enrollment is about 2,900, of whom 2,000 are full-time students. The full-time faculty numbers over 750. There are more than 150 part-time faculty and over 900 graduate associates, graduate staff associates, graduate research associates, and graduate teaching associates.

On the graduate level, Ohio University offers master's degrees in nearly all of its major academic divisions, and doctoral degrees can be earned from selected departments, as indicated on page one of this catalog. The College of Osteopathic Medicine offers a four-year professional program leading to the Doctor of Osteopathy degree.

The city of Athens, home of Ohio University, is located about 75 miles southeast of Columbus. The University offers a wide range of cultural activities not only to the University community but to all of southeastern Ohio.

Lecturers, poets, singers, dancers, films, and theater or music groups appear on campus within walking distance of the residence halls. Many events are free, though some do have nominal charges.

The University is accredited by the North Central Association of Colleges and Secondary Schools and by the recognized professional accrediting associations identified with its major academic divisions. It holds membership in the leading state and national educational and professional associations.

The University's academic calendar consists of four quarters of from 10 to 12 weeks' duration, the summer session having two five-week terms. Many students find it advantageous to register for all four quarters, thus having an opportunity for uninterrupted study and research.

DEGREE-GRANTING COLLEGES

College of Arts and Sciences

The College of Arts and Sciences offers the Master of Arts or Master of Science degree through 16 departments. Multi-departmental and special-discipline master's degrees are offered in social sciences, environmental studies, and public administration. Doctor of Philosophy degrees are offered through eight departments, including biological sciences, chemistry, English, environmental and plant biology, history, mathematics, physics and astronomy, and psychology. More than one area of emphasis is available at both degree levels in several of these departments.

Among the college's graduate facilities and equipment are a Tandem van de Graaff nuclear accelerator, a helium low-temperature laboratory, three electron microscopes, a mammalian recombinant genetics laboratory, a nuclear magnetic resonator, several chemical spectrometers, a photomicroscopy laboratory, a herbarium with over 4,500 species, and a large preserve of remnant primary forest.

Each department will provide, upon request, a brochure describing specific degree requirements and specialized graduate facilities, and any other type of information a prospective student might need.

College of Business Administration

The College of Business Administration offers the Master of Business Administration degree through its full-time M.B.A., part-time M.B.A., and Executive M.B.A. programs. The full-time M.B.A. is offered as a residential program on the Athens campus. The part-time program is offered on the Lancaster campus. The Executive M.B.A. program is open only to experienced business executives and is offered in a two-year sequence of weekend courses on the Lancaster campus. The Ohio University M.B.A. and E.M.B.A. programs are fully accredited by the American Assembly of Collegiate Schools of Business.

In the full-time program, the M.B.A. degree may be earned in 13 months. It is an intensive program beginning in mid-August, with classes meeting (except for the period between Christmas and New Year's) until mid-September of the following year.

The full-time M.B.A. Program provides the critical balance between theory and application. Students are involved in developing the knowledge, skills, and abilities required of successful managers. Learning in the context of solving complex business problems is stressed to accomplish the following goals:

- Development of functional expertise
- Development of managerial skills
- Application and integration of functional and managerial expertise
- Development of lifelong learning skills

The full-time program is limited to 40 Phase II students, and the Executive M.B.A. admits only 30 students each year. These small, highly selective programs permit students to form close associations with their peers and to meet frequently with faculty.

Full and partial graduate associateships and tuition scholarships are available to students in the full-time program.

College of Communication

The College of Communication offers a variety of graduate programs designed to provide both academic and professional training. The master's degree is offered by the three major schools in the college: Interpersonal Communication, Journalism, and Telecommunications. In addition, the college has a Ph.D. program in the School of Interpersonal Communication and a mass communication Ph.D. program which is administered jointly by the schools of Journalism and Telecommunications. Laboratory opportunities are provided through television station WOUB-TV on Channel 20, radio stations WOUB-AM and -FM, a community cable television channel, a modern electronic graphics lab in journalism, and research centers, as well as microcomputer labs, in the various schools.

Financial support is available in the form of teaching, research, and graduate associateships in each of the schools. The programs also offer tuition scholarships and a limited number of fellowships.

Detailed information concerning graduate programs and possible financial support may be obtained by writing directly to the Director of Graduate Studies of the School of Interpersonal Communication, School of Journalism, or School of Telecommunications, Ohio University, Athens OH 45701-2979.

College of Education

Graduate study and research in the College of Education place primary emphasis on bridging the gap between theory and practice—between research and the everyday educational and human problems that confront students, teachers, counselors, curriculum workers, administrators, and other professionals in related fields.

The college offers the Master of Education degree in elementary education, middle school education, secondary education, special education, talented and gifted, educational media, reading, mathematics teaching, microcomputers, educational leadership (public/private/higher education), student personnel services, and counselor education (school, college, community agencies, rehabilitation, counseling in business and industry). A Master of Arts is offered in economic education. A six-year program is offered for those professionals who seek specialization and/or certification in principalship or superintendency. The Doctor of Philosophy is offered in curriculum and instruction, counselor education, student personnel services, and educational leadership (public/private/higher education).

Master's students may attend full- or part-time; there is no residency requirement for a master's degree. A master's student attending full-time can complete most programs in a minimum of four academic quarters. The Doctor of Philosophy requires a three-quarter continuous residency on the Athens campus and can be completed in a minimum of three academic years.

These programs balance theory and practice, and academic research and its applications. Practice and internships constitute an important component of these advanced programs. Interdisciplinary study is encouraged when appropriate.

All professional education programs are fully accredited by the National Council for Accreditation of Teacher Education (NCATE).

Detailed information concerning graduate programs may be obtained by writing to Graduate Studies, McCracken Hall, Ohio University, Athens OH 45701-2979.

College of Engineering and Technology

Programs of study leading to the Master of Science degree are available in chemical, civil, electrical, industrial and systems, and mechanical engineering. In addition, programs leading to the Ph.D. degree are offered in chemical engineering, electrical engineering, and in a cross-disciplinary program in integrated engineering with specialties in materials processing; geotechnical and environmental; and intelligent systems. Details on requirements are given in the departmental section of this catalog.

The graduate programs in engineering are enhanced by an endowment provided by a distinguished alumnus, the late Dr. C. Paul Stocker and his wife, Beth. Income from this endowment, which has grown to $15 million, supports advanced research, equipment, scholarships, faculty enrichment, and two faculty chairs, which bring some of the world's leading engineering talent to the campus for visiting professorships. The college moved into the Stocker Engineering and Technology Center in the fall of 1985. This facility provides over 3.5 acres of floor space for instruction and research. Interdisciplinary research in the college is conducted through the college's seven centers: (1) Avionics Engineering Center; (2) Center for Advanced Materials Processing Research; (3) Center for Automatic Identification Education and Research; (4) Center for Corrosion in Multiphase Systems Research; (5) Center for Geotechnical and Environmental Research; (6) Center for Stirling Technology Research; and (7) Ohio Coal Research Center. Students and faculty cooperate across departments to perform research in multidisciplinary projects.

Programs leading to the M.S. and Ph.D. degrees in chemical engineering are offered with particular research emphasis in the areas of coal conversion and utilization, polymerization reaction engineering, process control and dynamics, biochemical engineering, corrosion, environmental assessment, and separation processes. Interdisciplinary efforts also are occurring in some areas.

The M.S. degree in civil engineering may be earned in water resources, fluid mechanics, solid mechanics, geotechnical engineering, environmental engineering, structures, or transportation. Research includes treatment of water, wastewater, solid waste management, soil structure interaction, centrifugal modeling, constitutive relations for soils and rocks, nondestructive testing, computational methods in structural mechanics, computer-aided structural engineering, long-term water resources forecasting, and stochastic flood and drought analyses.

Programs leading to the M.S. and Ph.D. degrees in electrical engineering are offered. Areas of interest include computers; control systems; VLSI design; communications; information theory; electronic circuits; solid-state electronics; energy conversion and power systems; power electronics; electromagnetics; avionics; microwave circuits; network theory; signal processing; and image processing. One of the most distinctive features of the Department of Electrical and Computer Engineering at Ohio University is its Avionics Engineering Center. Initiated in 1963, this center provides educational opportunities for graduate students. The center participates in NASA's Tri-University Program with Princeton University and the Massachusetts Institute of Technology. Research projects at the center include instrument landing technology, airborne data collection, communications, and navigation system analysis.

The Department of Industrial and Systems Engineering offers the M.S. degree with specialized study concentrations in three areas of interest: applied operations research, human factors engineering and ergonomics, and manufacturing systems engineering. Each of these areas has a core set of courses and recommended electives.

College of Fine Arts

The College of Fine Arts at Ohio University offers graduate degrees in five of its seven areas. The School of Art offers an M.F.A. in ceramics, painting, photography, printmaking, sculpture, art history, and art history/studio. The M.A. is offered in art education and photography. The School of Comparative Arts offers a Ph.D. program in liberal, humanistic study in the arts of western civilization. The School of Dance and the School of Visual Communication do not offer graduate degrees; however, some graduate courses are available each quarter. The School of Film offers an M.F.A. in film scholarship or production and an M.A. in scholarship. The School of Music offers the Master of Music in applied music (performance and performance-pedagogy), history and literature, theory and composition, music therapy, or music education. The School of Theater offers an M.F.A. or M.A. in playwriting or theater general, the M.A. in theater history and criticism, and the M.F.A. in the professional programs of acting, directing, and production design.

In addition to the stipulated programs within each academic unit of the college, an interdisciplinary M.A. is available. The guidelines for the interdisciplinary program may be obtained from the Office of Graduate Student Services. Also, see the Individual Interdisciplinary Programs section of this catalog for other options.

Graduate support is available in the form of teaching, research, and graduate associateships. Graduate internships also are available for selected degree programs. Prospective students may obtain information on graduate support and financial aid by contacting the director of the graduate program in each school.

College of Health and Human Services

The College of Health and Human Services was established as Ohio University's ninth degree-granting college in January, 1979. It became operational July 1, 1979, with a mission of promoting an environment within which students may pursue undergraduate and graduate degrees in health and human service fields. The college includes the schools of Health and Sport Sciences, Hearing and Speech Sciences, Human and Consumer Sciences, Nursing, and Physical Therapy. Graduate programs are available as follows:

School of Health And Sport Sciences
Master of Health Administration
  Concentrations:
    Acute Care Administration
    Community Health
    Health Promotion
    Long-Term Health Care Administration
Master of Sports Administration
Master of Science in Physiology of Exercise
Master of Science in Physical Education
  Concentrations:
    Athletic Administration
    Athletic Training
    Foundations of Coaching and Teaching
    Physical Education
    Recreational Studies
    Sport Physiology and Adult Fitness

Detailed information concerning graduate programs and possible financial support may be obtained by writing directly to the Graduate Coordinator, School of Health and Sport Sciences, Grover Center, Ohio University, Athens OH 45701-2979.

School of Hearing and Speech Sciences
Master of Arts in Hearing and Speech Sciences
Doctor of Philosophy
  Concentrations (For Both Degrees):
    Audiology
    Speech Language-Pathology

Detailed information concerning graduate programs and possible financial support may be obtained by writing directly to the Graduate Coordinator, School of Hearing and Speech Sciences, Lindley Hall, Ohio University, Athens OH 45701-2979.

School of Human and Consumer Sciences
Master of Science
  Concentrations:
    Early Childhood and Family Studies
    Early Childhood Education or Family Studies
    Clinical Nutrition
    International and Community Nutrition

Detailed information concerning graduate programs and possible financial support may be obtained by writing directly to the Graduate Coordinator, School of Human and Consumer Sciences, Tupper Hall, Ohio University, Athens OH 45701-2979.

College of Osteopathic Medicine

The University offers a program leading to the Doctor of Osteopathy (D.O.) degree through its College of Osteopathic Medicine. Doctors of osteopathy are highly qualified physicians, licensed in all 50 states to practice all scientifically accepted forms of medical diagnosis and treatment. There are currently about 35,000 D.O.s in the United States.

The College of Osteopathic Medicine has an enrollment of about 400 students in its four-year curriculum. All applicants must take the Medical College Admission Test. Successful applicants demonstrate a high undergraduate grade-point average and have completed coursework in biology, organic and general chemistry, physics, English, and the behavioral sciences.

The emphasis of the college's curriculum is on family medicine as preparation for both future family practitioners and those who will specialize. The college was established by the Ohio General Assembly in 1975 to help alleviate a statewide shortage of family physicians.

For further information, write for a copy of the *College of Osteopathic Medicine Catalog* and other admissions materials. Address inquiries to Admissions, College of Osteopathic Medicine, 102 Grosvenor Hall, Athens OH 45701. Prospective students can also call the medical school at 1-800-345-1560 (for medical school inquiries only).

GRADUATE PROGRAMS

Graduate degrees are granted in the following areas.

College of Arts and Sciences

* Biological Sciences
* Chemistry
Economics
* English Language and Literature
* Environmental and Plant Biology
Environmental Studies
Geography
Geological Sciences
* History
Linguistics
* Mathematics
Modern Languages (French, Spanish)
* Molecular and Cellular Biology [1]
Philosophy
* Physics and Astronomy
Political Science
Public Administration
* Psychology (Clinical, Experimental, Industrial/Organizational)
Social Sciences
Sociology

College of Business Administration

Business Administration

College of Communication

* Interpersonal Communication (Interpersonal Communication, Organizational Communication, and Rhetorical and Communication Theory)

- Journalism (Advertising, Public Relations, Newspaper, Magazine, Broadcast News, Visual Communication—Photojournalism, Mass Communication Research)
- Telecommunications (International Telecommunications Studies, Management, Audience Analysis, Policy/Regulations, Screenwriting, Critical Studies, Media Studies)
- *Mass Communication (Journalism, Telecommunications)

College of Education

- *Applied Behavioral Sciences and Educational Leadership (Educational Administration, Educational Research and Evaluation, Counselor Education, Higher Education, Student Personnel Services)
- *Curriculum and Instruction (Economic Education, Educational Media, Elementary School Education, Instructional Technology, Mathematics Teaching in the Secondary School, Middle School Education, Reading, Secondary School Education, Supervision, Special Education, Microcomputers in Education, Teaching the Talented and Gifted, Social Studies Education)

College of Engineering and Technology

- *Chemical Engineering
- Civil Engineering
- *Electrical and Computer Engineering
- Industrial and Systems Engineering
- *Integrated Engineering
- Mechanical Engineering

College of Fine Arts

- Art (Art Education, Art History, Art History/Studio, Ceramics, Painting, Photography, Printmaking, Sculpture)
- *Comparative Arts
- Film
- Music (Composition, Education, History and Literature, Performance, Theory)
- Theater (Professional Actors Training Program, Professional Production Design Program, Professional Directors Training Program, History and Criticism, Playwriting, and Theater General)

College of Health and Human Services

- Health and Sport Sciences (Athletic Administration, Athletic Training, Exercise Physiology, Foundations of Coaching, Health Administration, Recreation Studies, Sports Administration and Facility Management, and Sport Physiology and Adult Fitness)
- *Hearing and Speech Sciences (Audiology, Speech Pathology)
- Human and Consumer Sciences (Child Development and Family Life, Food and Nutrition, General Home Economics, Home Economics Education, Interior Design, and Textiles and Clothing)

International Affairs

(Administrative Studies, African Studies, Communication and Development Studies, Development Studies, Latin American Studies, Southeast Asia Studies)

Interdisciplinary Programs

- *Individual Interdisciplinary Programs

College of Osteopathic Medicine

Offers a four-year professional program leading to the degree of Doctor of Osteopathy (See separate catalog)

FACILITIES AND SERVICES

Office of Graduate Student Services

The Office of Graduate Student Services assists students with the University processes of admission and registration and is a source of information on matters affecting graduate students. Personnel in this office are available for consultation and assistance on matters of interest to graduate students. All official graduate files are kept in this office.

Affirmative Action

It is the policy of Ohio University that there shall be no discrimination against any individual in educational or employment opportunities because of race, color, religion, national origin, sex, status as a disabled veteran or veteran of the Vietnam Era, or disability. Also, there shall be no discrimination because of age except in compliance with age requirements of retirement plans or state and federal laws and guidelines.

Furthermore, the University conducts a vigorous affirmative action program in order to promote equal employment opportunities and to ensure nondiscrimination in all educational programs and activities.

It is a goal of Ohio University to increase the representation of minority students in all of its graduate programs, and to that end, specific efforts are being undertaken by individual academic departments to recruit minority graduate students. Special opportunities for minority and/or female students have been created through grant funds in several areas including telecommunications, osteopathic medicine, electrical engineering, psychology, education, and health careers.

For more information about special opportunities, contact the graduate chair in the specific department or the dean's office in the appropriate college.

Sexual Harassment. Sexual harassment of students, faculty, or staff is prohibited at Ohio University. The following is the definition of sexual harassment: unwanted sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when:

1. Submission to such conduct is made either explicitly or implicitly a term or condition of employment or of a student's status in a course, program, or activity; or
2. Submission to or rejection of such conduct is used as the basis for decisions affecting the individual; or
3. Such conduct has the purpose or effect of unreasonably interfering with the individual's work, performance, or educational experience; or creating an intimidating, hostile, or offensive environment.

Examples (not to be construed as exhaustive) of sexual harassment include:

1. Pressure, subtle or overt, for sexual favors, accompanied by implied or overt threats concerning one's job, grades, or letters of recommendation.
2. Inappropriate display of sexually suggestive objects or pictures.
3. Unnecessary touching, pinching, patting, or the constant brushing against another's body.
4. Use of sexually abusive language (including remarks about a person's clothing, body or bodily movement, or sexual activities).

All Ohio University employees and students are responsible for compliance with this policy. All University supervisory personnel have an affirmative responsibility to discourage and eliminate conduct inconsistent with this policy. Specific concerns or complaints regarding sexual harassment should be brought to the attention of the supervisor of the alleged offender. The offices of Judiciaries, Personnel, Affirmative Action, or the University Ombudsman may be consulted or apprised of the complaint. Such consultation will be held in absolute confidence and no action will be taken without the knowledge of the complainant.

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*Ph D granting areas

Degree obtained simultaneously in biological sciences, chemistry, environmental and plant biology, or psychology

Details of the University's Affirmative Action Plan, as well as information about related policies and state and federal nondiscrimination laws and guidelines, are available through the Office of Affirmative Action, 101 Crewson House, Ohio University, Athens OH 45701-2979; phone 614-593-2620.

Career Services

The Office of Career Services offers students and alumni assistance in making career decisions, exploring career options, and conducting effective job searches. Services include the following:

- Individual advising on career decision-making and job search strategies;
- Seminars on career decision-making, resume preparation, interview techniques, and other aspects of the job search;
- A Mock Interview Program which allows students to practice and improve their interview performance;
- An Alumni Resource Network which enables students to connect with O.U. alumni who are interested in providing advice or career assistance;
- Career Fairs that bring a wide variety of employers to campus to discuss career opportunities with students;
- A Career Resource Library containing a wealth of material: career information, employer directories, graduate school guides and admissions test bulletins, internship listings, employer literature, and professional job vacancies.

In addition to the above services which are free to all students, Career Services provides special assistance to students who are ready to graduate. These include on-campus interviewing, resume referral, credential files, and a bi-weekly job listing. Students may use these services by registering with Career Services during the academic year in which they will graduate.

Registration requires payment of a nominal fee and attendance at an orientation seminar explaining services, procedures, and job-hunting techniques.

All students are encouraged to work with Career Services throughout their University experience for assistance in all career-related matters.

Computing and Technology Services

Computing Services. The Instruction and Research Center (IRC) provides state-of-the-art computing resources and facilities to all Ohio University students at no charge (except for laser printing). Professors or instructors arrange for student access to course-specific computer resources.

The Instruction and Research Center operates a number of satellite labs across the campus where students may use computer terminals or microcomputers for their academic work. All terminals and many of the microcomputers in the labs can be used to access Ohio University's network of computers.

The labs are located across the campus, including Alden Library, Computer Services Center, Copeland Hall, Ellis Hall, Grover Center, Haning Hall, Innovation Center, Morton Hall, Music Building, and Stocker Center. Many departments also operate computing labs for their own students. The departmental and IRC-managed locations have a wide variety of microcomputer software available, including FORTRAN, Pascal, Basic, WordPerfect, Lotus, MacWrite, MacDraw, and many others.

Three residence halls have labs available. Jefferson Hall and Brough House each have a terminal cluster and printer connected to the campus computer network. Hoover House contains microcomputers that can also be used to access mainframe computers.

The Alden Instructional Support Lab also houses 26 self-instructional audiovisual carrels, allowing students to use videocassette playback equipment, as well as synchronized slide and filmstrip equipment, as required by academic courses.

The main offices for the Instruction and Research Center are housed with the Computer Services Center Instructional Support Lab, located on the ground floor of the Computer Services Center. The Alden Instructional Support Lab is located on the second floor of the Alden Library. Open lab hours for the computer labs are posted in the labs on a quarterly basis.

A network of high-speed printers is conveniently located around the campus for mainframe printed output. Most of the micro labs contain at least one letter quality printer, and high-quality laser printer output is available in the Alden and Computer Services Center labs.

Communication Network Services (CNS), a department within Computing and Technology Services, provides voice and data communications, along with local area networking support to the campus community.

The campus telephone system, owned and maintained by Ohio University, furnishes approximately 8,500 voice lines and connects over 110 buildings on campus through a fiber-optic network. Supporting more than 7,000 students and 3,500 faculty and staff on campus, CNS provides on-campus calling, local calling, and long distance service to the campus, as well as maintenance, installation, and technical support for microcomputer and audiovisual equipment for Ohio University.

CNS also supports the University Wide Area Network, reaching all University departments and connecting thousands of computers to campus computing resources. Links to other networks have been established, including the Ohio Academic Resource Network (OARnet), Internet, and the five Ohio University regional campus locations, giving students and faculty the ability to access information from networks around the world.

Counseling and Psychological Services

Counseling and psychological services are available to graduate and undergraduate students on an individual and group basis for educational, career, and personal adjustment concerns. Confidential consultations are provided by Counseling and Psychological Services counselors, psychology trainees, and psychologists.

Students having academic difficulties may receive help in understanding and resolving their concerns so that they may improve their performance.

Students who are uncertain about their educational or career objectives may obtain assistance in appraising their abilities, interests, performance, etc., so that they may identify more appropriate and satisfying directions.

Students with personal problems of any kind (emotional, social, marital, substance abuse, stress, etc.) may receive help in understanding and resolving those difficulties. Workshops on a variety of topics, designed to support the educational, social, and personal growth of students, are frequently offered and widely publicized.

The Miller Analogies Test (MAT) is administered biweekly.

Students who wish an appointment to discuss their educational, career, or personal adjustment concerns should contact the receptionist on the third floor of Hudson Health Center or call 614-593-1616 between 8 a.m. to noon and 1 p.m. to 5 p.m., Monday through Friday.

Graduate Council

The Graduate Council reviews, coordinates, and serves as an advocate for graduate education at Ohio University. The council has both advisory and policy-recommending responsibilities for graduate education. The council initiates, reviews, and recommends University-wide policy and new directions for graduate education.

The Graduate Council recommends to the University Curriculum Council the initiation, implementation, and elimination of graduate programs and degrees at Ohio

University. Other recommendations by the council go through the provost to the president for final approval.

The composition of the Graduate Council represents both those departments granting Ph.D. degrees and those departments offering only master's degrees.

Graduate Student Senate

The Graduate Student Senate is composed of student representatives from each graduate academic department. It represents the graduate student body in the University community and provides a forum in which graduate students can discuss issues related to their concerns about both academic and nonacademic aspects of the community.

The Graduate Student Senate is recognized by the University as the representative graduate student organization, and therefore is responsible for recommending graduate students for positions on University standing committees. The senate also awards the Outstanding Graduate Faculty Award, the Outstanding Graduate Student Award, and the Graduate Student Senate John Houk Memorial Research Grants for graduate student research. Other Graduate Student Senate activities include workshops on topics such as grant writing and library resource system identification and use, and yearly research activities on the quality of graduate life and education.

The Graduate Student Senate meets on a regular basis year-round. All meetings are announced and are always open to the public.

Anyone wishing more information or a copy of the Graduate Student Senate constitution may write the President of Graduate Student Senate, Ohio University, Athens OH 45701-2979.

Health Service

Health service facilities are located in the Hudson Health Center. They include an outpatient clinic and complete ancillary services, including X-ray, clinical laboratory, physical therapy, pharmacy, and health education services. The health service staff includes several full-time physicians; two pharmacists; a coordinator of health education services; registered nurses; and registered laboratory, X-ray, and other allied personnel.

A continuous health record is maintained on each student, beginning with the report of health history obtained at the time of the student's first visit to the Hudson Health Center for evaluation and/or treatment of any medical condition. A tuberculosis skin test administered by the Student Health Service is required of all new international students and those returning after an absence of two or more years at the time of the student's first arrival on the campus.

Major Medical Insurance Plan. A major medical insurance plan designed to supplement the care provided by the Student Health Service is mandatory for every student registered for more than six hours unless the student submits evidence of coverage by a comparable private insurance plan.

The plan provides protection against major medical and surgical expenses regardless of where the student may be. In addition to the medical and surgical benefits payable under the terms of the group plan contract, an accidental death payment is part of the policy.

To assist married students, a major medical-surgical expense insurance plan for dependents is available through the Ohio University comprehensive group medical insurance policy.

Information Center

A complete information service for students and campus personnel, in the lobby of Baker Center, provides answers to questions regarding University services, programs, campus events, and facilities. For information, call 614-593-4000.

The Information Center has Ohio University brochures, the campus directory, academic and social calendars, and listings of University committees and departmental chairpersons. It receives applications for student participation on University committees and researches questions when information is not immediately available. In addition, it provides check cashing services and typewriter rentals.

For University personnel and student telephone numbers, call the switchboard by dialing 614-593-1000 (days) or the Student Directory at 593-2700 (evenings).

Ohio University Libraries

The Alden Library has over 1.6 million bound volumes, more than 2 million items including microform units, maps, slides, cassettes, videotapes, disks, and other research materials, and seating for 2,800 patrons. The central facility serves the entire student body and faculty with special services available throughout the seven-story building. The library is open seven days a week for a total of 102 hours.

The main campus entrance is on the fourth floor, where the catalog terminals and main circulation desk are housed. The reference collection, library instruction, children's collection, Inter-library Loan, and Collection Development and Technical Services staff are also located on this central floor, as is a collection of national and trade biographies. Government Documents and Archives and Special Collections occupy the fifth floor, while the top two levels contain the research collection, graduate lockers, and faculty study offices.

The Health Sciences Library, art gallery, and a reserve book room are on the third floor. On the second floor are current periodicals, the Preservation Department, and the Fine Arts Department; the Southeast Asian Collection and the Microform/Map/Nonprint Department are located on the first floor.

The main collection consists of more than 1.6 million volumes, of which over 280,000 are government documents arranged by Superintendent of Documents classification. In addition, there are more than 27,000 pamphlets in vertical files, 160,000 maps, and more than 11,000 periodical titles currently received. Holdings in microform format—almost 2 million units—have increased greatly in the last few years and are an extremely rich, but often overlooked, resource base. Graduate students are encouraged to visit the microform area to explore the holdings, most of which are not listed in the catalog.

In separate buildings are the Music/Dance Library and a number of departmental collections in several scientific disciplines. Each of the regional campuses also has a well-established library.

To make the libraries' collections more accessible to users, ALICE, an on-line public-access catalog and circulation system, was implemented in 1983. Catalog terminals are located throughout the library for easy access to the libraries' holdings. Remote access is available to anyone having direct or dial-in access to the University computer network. General tours, instructional lecture tours, and a video orientation presentation are offered to classes and groups upon request. Subject bibliographers are available to give assistance with problems in specific academic disciplines.

Electronic information services are available to assist graduate students and other researchers in identifying and obtaining resources. The library offers over 60 CD-ROM products—many networked within Alden Library. Library workstations also provide access to statewide resources on OhioLINK, to national and international resources on Internet, and to the vast OCLC union catalog. In addition, librarians can assist with online retrieval of information using several commercial data base services. Through OCLC and other networks linking libraries around the country and around the world, materials in distant collections are now easily accessible. The library participates in the age of resource sharing to better serve the graduate student.

Motor Vehicles

University policy and regulations state that no student shall drive, operate, park, or otherwise use a motor vehicle on the land and property of the University without first registering the vehicle with the director of Campus Safety. This regulation includes student-owned vehicles, vehicles belonging to parents or relatives (including wives or husbands), friends, rental agencies, and dealers.

Upon registration each quarter, the student will be given a decal which must be attached to the vehicle as described in the brochure issued with the decal.

No two- or three-wheeled motor vehicles or motorized bicycles are permitted on University property except in areas specifically designated for the parking of those vehicles. Signs posted indicate streets closed to these vehicles.

Ombudsman of the University

The ombudsman's duties include the maintenance of simple, orderly procedures for receiving requests, complaints, and grievances, both from students and from other members of the University community. The ombudsman works, where a pattern of grievances develops, for a change in regulations, procedures, or personnel, to prevent problems. Further duties include assisting individuals in accomplishing the expeditious settlement of their problems: intervening in the bureaucratic process on behalf of individuals when that process unnecessarily or unfairly impinges upon them, and using broad investigatory powers and direct and ready access to all University officials of instruction and administration. Finally, the ombudsman reports valid complaints directly to the president when no remedy has been found elsewhere in the University.

The office of the ombudsman of the University is located in Crewson House, telephone 614-593-2627.

Research and Sponsored Programs

The Office of Research and Sponsored Programs assists faculty and graduate students in obtaining grants for external support of research, doctoral dissertations, fellowships, and other University-based projects. The office maintains a library of information sources on grant opportunities which is open to all members of the University community. Graduate students are often appointed to externally supported faculty-directed research projects as graduate research associates and receive a stipend and tuition scholarships.

LIVING ARRANGEMENTS

Residence Halls and Meal Plans

Ryors Hall. This attractive residence hall on the West Green has been designated as the official University Graduate Residence Center and is available for male and female graduate students. All rooms are single or double accommodations. The dining hall for the West Green is located in Boyd Hall.

Ryors Hall is an especially convenient location for graduate students in the colleges of Business Administration, Engineering and Technology, and Health and Human Services, and many departments of the College of Arts and Sciences, as well as the medical students in the College of Osteopathic Medicine. The quiet residential setting is especially helpful for graduate students seeking to experience a living-learning environment.

Meal Plans. Four meal-plan options are offered so that you can select the plan that is most compatible with your lifestyle. The 7-meal plan is our least expensive and allows you to select any 7 meals during the week. This plan requires supplemental meals. The 14-meal plan allows you to select any 14 meals during a seven-day period and is designed for the person who prefers two meals per day or the student who is away from the campus on weekends. The 20-meal plan permits you to eat all meals served during a seven-day period. A brunch is served on Sunday instead of breakfast and lunch. Our most flexible meal plan is the Green Carte Blanche which provides you with the 20-meal plan and permits you to take guests to the dining hall, as well. This card also can be used in the snack bars. All of our dining halls operate on an "unlimited seconds" policy.

Interim Housing. For graduate students, it is our intent to provide housing at a nominal cost during the breaks between the fall and winter quarters and the winter and spring quarters when most residence halls are normally closed. Although such housing may be in your permanently assigned hall, *it may also be necessary to consolidate those students who do remain on campus during the breaks into other facilities, which would mean you would have to make a temporary change of residence.*

Please note that there is a period of about 40 days from Thanksgiving through New Year's Day that Ohio University is not in session. You should plan to have sufficient funds to cover your living expenses for this time period. The room cost on campus will be about $8 per night, and food service will *not* be available on the campus. Meal costs in local restaurants will be considerably more than the per-day cost of your regular board plan.

While graduate students are not required to live in University housing, many do take advantage of our facilities. *All University residence hall contracts are binding for the entire academic year (fall, winter, and spring quarters) unless you graduate or leave Ohio University.* If you are interested in information about University-owned family living units, or if you have questions about the graduate halls, please contact the Housing Office, Chubb Hall, Athens OH 45701-2979 (phone 614-593-4090).

Students residing off campus may arrange to eat in University dining halls by signing an outside-boarder contract. These arrangements can be made through the Housing Office on a quarterly basis. Meals are served throughout the academic year except during intersessions between quarters.

After admission to Ohio University, each graduate student will receive information concerning the residence halls. These materials will provide specific rates for room and board, facilities available within the halls, and services provided. Should you have other questions about residence halls, contact the Director of Housing, Chubb Hall, Ohio University, Athens OH 45701-2979.

Graduate students are eligible for head resident positions in campus fraternity and sorority houses. Compensation ranges from room only to room and board and a small salary. For further information, contact the Office of Student Life, Baker Center.

University Apartments

Ohio University has two housing complexes rented primarily to married students and single graduate students. The Wolfe Street Apartments are located on the southeast corner of the main campus, near Clippinger Laboratories. The Mill Street Apartments are six blocks northeast of the main campus, adjacent to the intramural fields.

Linen, bedding, dishes, lamps, and rugs are not furnished in the Wolfe Street or Mill Street apartments. Air conditioners are permitted, provided guidelines established by the University are followed. Furniture may be arranged to suit the occupants, but University furnishings may not be stored or removed from the apartments.

Mill Street Apartments. Each apartment in the Mill Street complex, which consists of 13 modern brick buildings, is furnished with an electric range, refrigerator, and draperies. There are three coin-operated laundries conveniently located within the housing complex.

All utilities are included in the monthly rent, and a telephone outlet and an outlet for the television cable are provided in each unit. Either or both of these services may be obtained by contacting the appropriate company—General Telephone Company of Ohio or Continental Cablevision. The cost of these two optional services is not included in the rent.

One Bedroom. There are 66 one-bedroom apartments housed in a six-story building which has elevator service to accommodate both passengers and furnishings. There are both furnished and unfurnished apartments available. The current monthly rental rates (subject to change as economic conditions warrant) are: furnished $449 and unfurnished $395.

Two Bedroom. Each of the 127 apartments, housed in 12 smaller buildings, has direct access to the outdoors. The buildings are grouped around interior courts with children's play areas. There are ample parking facilities for tenants and an area for guest parking in the rear lot. The current rental rate for the furnished two-bedroom apartment is $520, unfurnished, $466 (subject to change as economic conditions warrant).

Wolfe Street Apartments. All of the Wolfe Street Apartments, located in two two-story brick buildings, are furnished except for draperies. All utilities are included in the rent, except for the telephone and TV cable. Laundry rooms with coin-operated machines are located in the complex.

There are four types of apartments at Wolfe Street:

Efficiency (4)	$310
One Bedroom (38)	$353
Bedroom-Nursery (8)	$387
Two Bedroom (2)	$432

(All apartment rental rates are subject to change as economic conditions warrant.)

CULTURAL EVENTS AND ENTERTAINMENT

University students have the opportunity of seeing theatrical productions produced by the Ohio University School of Theater during the academic year. In addition, the Ohio Valley Theater produces two productions during the summer.

The School of Music offers recitals and concerts by students, faculty, and visiting artists in Memorial Auditorium and the School of Music recital hall. The School of Music Opera Workshop produces an annual opera in Memorial Auditorium.

The Performing Arts Series is composed of eight to ten national and international programs that include symphony orchestras, Broadway theater, dance, recitalists, choral, and ethnic programs. All programs are held in Memorial Auditorium.

A variety of art exhibitions, including work by the School of Art faculty and students, are displayed in the Seigfred Hall gallery. In addition, special shows and visiting exhibits are presented in the Trisolini Gallery.

Pop concerts by contemporary entertainers are sponsored by student organizations on campus. First-run movies, foreign films, experimental movies, and classic films are shown throughout the year.

The University, through the schools of Theater, Music, Dance, the Kennedy Lecture Series, and Student Lectures, invites distinguished speakers and artists to appear in recital or to lecture informally on campus.

The University's radio stations, WOUB-AM and -FM, and the educational television station, WOUB-TV, provide entertaining and educational programming for the University and the Athens community.

RECREATION

Recreational facilities include a gymnasium; an indoor ice skating rink; tennis courts; a golf course; an Aquatic Center, which includes a 50-meter indoor pool; athletic fields; and areas for activities ranging from softball to horseshoe pitching.

Ohio University is a member of the Mid-American Conference and participates in intercollegiate competition with men's varsity teams in football, basketball, baseball, swimming, golf, track, wrestling, and cross country and women's varsity teams in basketball, softball, field hockey, track, swimming, cross country, and volleyball.

The Baker University Center provides facilities, services, and programming for students, faculty, staff, visitors, and members of the Ohio University-Athens community. The building contains lounges, a large ballroom, dining rooms, television and conference rooms, and areas for bowling, billiards, and cards. Any type of food catering service can be provided. The center operates the all-campus Information Center. The office of the director of the center is open to provide assistance and guidance to individuals and groups desiring to use the center.

Many of the state's most scenic areas are located near Athens and are used as weekend retreats by students and faculty. Included are Dow Lake, located just east of Athens in a 200-acre state park and used by the University for educational and research projects; Lake Hope, located in Zaleski State Forest about 25 miles from Athens; the caves and gorges of the Hocking Hills State Park area; Burr Oak Lake, Glouster; and Lake Snowden, Albany.

◆ Application and Admission

APPLICATION

The prospective student submits to the Office of Graduate Student Services the two application forms, two official transcripts from each post-secondary school attended, official test scores as required by the department, a $25 nonrefundable fee for application to a degree program, and any other pertinent information in support of the application. Nondegree and transient application is $15; nondegree to degree status, or to a second Ohio University graduate degree program, is $10. Letters of recommendation are sent directly to the graduate committee of the department to which application is made.

Copies of the above materials are forwarded by the Office of Graduate Student Services to the department of the student's choice. The departmental graduate committee grants or denies admission and forwards the decision to the Office of Graduate Student Services. The student's file is reviewed for completeness, and a letter is sent to the student indicating admission, admission pending fulfillment of admission requirements, or denial of admission.

Admission to graduate study will be based on possession of a bachelor's degree from an accredited college or university and such factors as undergraduate scholastic grade-point average (both overall and in the proposed graduate major), selection of courses, pattern of grades, recommendations, test scores, work experience, and other relevant matters. Each department will give appropriate weight to the factors pertinent to its academic field.

A student with a bachelor's degree from an unaccredited institution usually will be required to supplement the undergraduate record with a satisfactory score on an acceptable standard college ability test.*

Supporting evidence of the student's ability in the form of the Graduate Record Examination, Graduate Management Admission Test, Miller Analogies Test, or other college ability tests may be required.* The student should consult with the specific department about necessary test requirements.

Applications for admission, supporting credentials, including official transcripts of all academic work, and the $25 nonrefundable application fee (a check or money order payable to Ohio University), should be received at least six weeks before registration for the quarter or summer term in which the student wishes to begin graduate study. Some departments have earlier deadlines for admission and financial support. Consult the Areas of Instruction section in this catalog for specific departmental deadlines.

All documents received by the University in connection with applications for admission become the property of Ohio University. Under no circumstances will they be returned to the applicant or forwarded to any agency or other college or university. Documents of students who are admitted to a graduate program but who fail to enroll for the quarter for which they are admitted are destroyed. Materials will be held, however, for a maximum of one year *if the student notifies the Office of Graduate Student Services in writing of a postponement of enrollment.*

All correspondence pertaining to the admission of a student to a graduate program should be addressed to the Office of Graduate Student Services, Ohio University, Athens OH 45701-2979.

SPECIAL NOTE FOR STUDENTS IN EDUCATION: Any student who has earned a master's degree in education at Ohio University and who plans to take additional work in education must reapply through the Office of Graduate Student Services for admission.

CATEGORIES OF ADMISSION

Ohio University has four categories of graduate student admission: degree, nondegree, postbaccalaureate, and transient.

Any admission to a graduate program must be regarded as provisional until the student has provided a final, official transcript from his or her undergraduate institution showing receipt of the bachelor's degree, and transcripts from any other post-secondary school attended. Transcripts should be submitted prior to admission to a program, but if this is not possible, it is the student's responsibility to see that final official transcripts are on file in the Office of Graduate Student Services no later than the end of the first quarter of registration in a graduate program. Failure to produce final transcripts could result in dismissal from the program.

Degree

Unconditional Admission—Those students approved by the major department for unqualified admission to a graduate degree program are given *unconditional* admission. Only students on *unconditional* admission status are eligible for University-funded associateships, fellowships, and/or scholarships.

Conditional Admission—Those students who have some deficiency in the entrance requirements, including a grade-point average below 2.5, may be approved by the department for conditional admission. Students in this category may achieve *unconditional* admission after the satisfactory completion of a prescribed program to remove any academic deficiencies, and by attaining a 3.0 or better grade-point average on the first 15 hours of graduate course credit. The departmental graduate committee will specify whether undergraduate courses which are required of a graduate student as further preparation for admission will be taken for audit or credit. Grades earned in such courses may be used by the graduate committee in evaluating the student's capability for graduate work. Undergraduate or audited courses will not satisfy requirements for any graduate degree. A student is eligible for University-funded associateships, fellowships, or scholarships only after he or she has received *unconditional* admission. A 3.0 or better grade-point average must be maintained to retain University financial support.

Nondegree

A student who wishes to take graduate courses, with no intention of working toward a graduate degree at Ohio University, must apply for admission in the regular manner but as a nondegree student. Approval for such admission does not constitute admission to a degree program, and the credit earned cannot normally be applied toward a graduate degree at Ohio University. In exceptional cases the appropriate academic departments will determine which courses, if any, taken while in a nondegree status may be applied subsequently toward degree requirements.

No more than 18 hours of academic work may be taken by a nondegree student, within a time limit of six years.

Postbaccalaureate

This status is applicable to the regional campuses for all quarters and to the Athens campus for *summer* only. The conditions of postbaccalaureate admission are the same as for nondegree graduate status: (a) admission status terminates after completion of 18 graduate hours, (b) admission to nondegree status does not constitute admission to a graduate degree program, (c) credit earned cannot normally be applied toward a graduate degree at Ohio University. Some graduate courses are not open to students admitted to postbaccalaureate status. If in doubt about the acceptability of postbaccalaureate status for a specific course, check with the department offering the course.

Transient

A graduate student currently working toward a graduate degree at another university may earn graduate credit at Ohio University to be transferred to the other university.

The student may be admitted to a transient status by submitting an application, a $15 nonrefundable application fee, and an official statement of good standing from the dean of the graduate school in which he or she is enrolled.

Such a student must request permission each quarter to register at Ohio University as a transient student.

Undergraduates Taking Graduate Courses

Except for Honors Tutorial students and students who meet the conditions listed below for Senior for Graduate Credit or Early Admission to a Graduate Program, no undergraduate may take a graduate course for credit.

Senior for Graduate Credit — An Ohio University student who has not yet completed all requirements for the bachelor's degree may be eligible for graduate study as a senior. This privilege is normally granted for one quarter only. The student must have an overall grade-point average of at least 2.5, and must be within nine credits of completing all requirements for the bachelor's degree. Permission to take such courses does *not* constitute admission to a graduate degree program (see next section).

The student may take graduate courses carrying graduate credit after securing the written recommendation of the dean of his or her undergraduate college and the graduate chair of the department, or departments, offering the graduate courses. The student admitted as a senior for graduate credit pays undergraduate fees and is not eligible for graduate associateship or scholarship support. A $10 application fee is charged for this privilege, and application must be made in advance of registration through the Office of Graduate Student Services. This privilege may also be extended to a well-qualified senior at another university who has nine or fewer credits to complete for the bachelor's degree.

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*Those who have taken any of these tests are urged to have their scores reported to the Office of Graduate Student Services, Ohio University, Athens OH 45701-2979.

Further information about the Graduate Record Examination (given in January, February, April, June, October, and December) or the Graduate Management Admission Test (given in January, March, July, November) may be obtained by writing to the Educational Testing Service, Box 955, Princeton NJ 08540. Applicants in the West Coast region should write to the E.T.S., Box 1502, Berkeley CA 94701. Students on the Ohio University campus may obtain test application forms from the Office of Graduate Student Services.

Information on the Miller Analogies Test may be obtained from The Psychological Corporation, 304 E. 45th St., New York NY 10017. This test may be taken at Ohio University through Counseling and Psychological Services, Hudson Health Center.

Early Admission to a Graduate Degree Program—A superior undergraduate student may seek early admission to a graduate degree program. The student must have an overall grade-point average of at least 3.5 and must have completed all undergraduate requirements except the total credit-hour requirement by the time of entry into the graduate degree program. After securing the written recommendation of the student's department, the departmental graduate committee, and the dean of his or her undergraduate college, the student may be admitted into a graduate degree program and may enroll in graduate courses for graduate credit. These courses can be used to satisfy both undergraduate and graduate degree requirements. Application for this privilege must be made in advance of registration through the Office of Graduate Student Services. Students who qualify for early admission to a graduate degree program are eligible for graduate associateship or scholarship support.

INTERNATIONAL STUDENTS

To be eligible for admission, an international student must have attained high scholastic distinction.

Materials required for admission to Ohio University are the two application forms, the $25 nonrefundable application fee, official test scores as required by the department, official transcripts from each post-secondary school attended, and any other pertinent information in support of the application. If transcripts are not in English, they must be translated and signed and certified as true copies by the registrar of the institution or by an official of the country's Consulate. Transcripts should be submitted prior to admission to a program, but if this is not possible, it is the student's responsibility to see that final, official transcripts are on file in the Office of Graduate Student Services no later than the end of the first quarter of their program. Failure to produce final transcripts could result in dismissal from a program.

All prospective students whose native language is not English must submit evidence of proficiency in the English language. Applicants must send results of the Test of English as a Foreign Language (TOEFL) to the Office of Graduate Student Services. Each international student entering Ohio University is required to be tested by the Ohio Program of Intensive English (OPIE) to determine his or her level of proficiency. This on-campus test is the criterion for English proficiency evaluation regardless of other test scores that may have been submitted with the application materials.

It is recommended—required by some departments—that a graduate student score 550 or above on the TOEFL. A score of 550 or above indicates that a student may not have to study English before being admitted as a full-time graduate student. A score of 480-550 generally indicates at least one quarter of part-time English study; a score of 400-475 indicates that two quarters of English may be necessary, and a score below 400 indicates at least three quarters of intensive English may be required.

Only after a student has passed the English proficiency test or has completed the Ohio Program of Intensive English and is enrolled in his or her graduate program is he or she eligible for Ohio University-funded associateships, fellowships, or scholarships.

To be considered for a teaching stipend, all prospective international graduate students who will be responsible for classroom or laboratory instruction and whose native language is not English must submit their scores on the Test of Spoken English (TSE). (Educational Testing Service, Princeton NJ 1982.) Students must score 230 or above on the TSE to be offered a teaching stipend. In addition to the TSE, the international student who is offered a stipend that requires instructional responsibility must take the SPEAK test after he or she arrives at Ohio University.

International applicants must submit evidence of the financial responsibility that is stated on the Affidavit of Financial Support. In the event that a student receives a University-funded associateship, fellowship, or scholarship upon admission, that financial assistance will be cancelled should the newly admitted student not demonstrate English proficiency after being tested by the Ohio Program of Intensive English upon arrival at Ohio University.

The Immigration and Naturalization Service requires that international students, while in the United States, be full-time students in the first three quarters after arrival. A vacation can then be taken in the next quarter as long as the students intend to register in the quarter after the vacation. Students must be making reasonable progress toward the completion of their degrees. In the event that a problem should arise with enrollment, international students are required to consult with their advisors and the international student advisor.

◆ Registration and Procedures

REGISTRATION

Details concerning the registration procedure are given in the *Schedule of Classes* which may be obtained at the Registrar's Office before each registration.

A graduate student with admission status who has not registered for a quarter or more (except summer) must request a re-enrollment form one month in advance of the quarter in which he or she intends to register. Former students whose admission status has expired through time limits or graduation must apply for a time extension or reapply for admission and re-enroll.

A graduate student *who has attended a regional campus* and who desires to enroll at the Athens campus, or vice versa, must fill out a *relocation* form, available from administrative offices at each of the campuses, one month in advance of registration.

A graduate student must be registered at the graduate level in any quarter in which he or she is receiving any service from the University or using its facilities. A master's student must be registered for at least one graduate credit hour and a doctoral student for at least two graduate hours. Any exceptions must be approved by the office of the dean of the college in which the student is enrolled. According to regulations, students currently attending the University may preregister for a subsequent quarter.

Identification Card

Each student, when he or she registers, will be issued an identification card by the Registrar's Office, 150 Chubb Hall. This card, when validated at registration, gives the student access to campus services, including, among others, the meal plan, library privileges, and health services through Hudson Health Center.

The card is issued free of charge according to these guidelines:

1. A new student or re-enrolling student who is returning after one year of absence will be issued a card free of charge.
2. A student whose name or social security number has changed will be issued a new card free of charge, provided the old card is returned when the new one is issued.

The Registrar's Office will charge a fee for replacing the card according to these guidelines:

1. A $9 fee will be charged to replace a card lost within one year of the last quarter of enrollment.

2. A $4 fee will be charged to replace a damaged card if the damaged card is returned when the new card is issued. Otherwise the $9 fee will be charged for replacement.

3. A $9 fee will be charged for a new card containing name or social security number changes ONLY if the old card is unavailable. If the old card is turned in when the new card is issued, no fee will be assessed.

Full-time Status

By state standards, a full-time equivalent student is one carrying 15 hours of graduate credit per quarter. The University uses this definition also. However, at the graduate level, the University uses different credit loads to define a full-time student for certain purposes. Examples are apparent as one reads through this catalog.

Veteran's Benefits

Graduate students receiving veteran's benefits must register for at least nine quarter hours of graduate work to receive full benefits. For more information about veteran's benefits, contact the Veterans Coordinator, 110 Chubb Hall.

Auditing

Students must follow the registration procedures outlined in the quarterly *Schedule of Classes* to audit a course. The academic fees for auditing a course are the same as the fees for taking a course for credit. Since auditing a course is a grading option, changes from audit to credit or credit to audit can only be done by dropping the course and re-adding it with the correct grading option. This change is permitted during the period when the telephone registration is available. With the permission of the instructor, a full-time student has the privilege of visiting classes in which he or she is not registered.

A student registering for *audit* is expected to attend classes consistent with the instructor's attendance policy. If the student fails to do so, the faculty member may have the course removed from the student's record. If this action results in a change of fees, the official University policy on refund of registration fees will be applied.

Cancellation of Registration

A student's advisor or graduate chair, with the approval of the dean, may request Graduate Student Services to cancel the student's registration because of poor academic performance; failure to meet course prerequisites; falsifying signatures; final transcripts not received; or other violations of University policy.

CHANGE PROCEDURES

Change of Class Schedule

A student who finds it necessary to add a course, withdraw from a course, or correct his or her registration must follow the procedures outlined in the quarterly *Schedule of Classes*. Changes that deal with programmatic content must be approved by the faculty advisor and the course instructor.

Adds. A course may be added only during the first 14 calendar days of the quarter. Students must follow the procedures outlined in the quarterly *Schedule of Classes*.

Drops. Students may drop any course through the fifth week (defined for the purpose of this policy as the 35th calendar day) of a term. After the end of the fifth week and before the last class day of the quarter, a student may petition his or her dean in writing, requesting to drop under special circumstances. Earning a low grade in the course is not to be considered such a circumstance. A student who drops a course during the first two weeks (first 14 calendar days) will have no record of that course on the transcript.

For any student who drops a course after the 14th day of the quarter, the instructor will assign a grade of WP or WF, indicating that the student was performing work considered passing (WP) or failing (WF) at the time the course was dropped. This grade will be awarded at the end of the quarter, at which time the name of each student who has dropped a course will appear on the grade sheet.

Students dropping hours prior to or during the first 14 days of the quarter, when such changes result in reduction of fees, are entitled to receive a 100 percent refund of the reduction. Changes made after the 14th day of the quarter will result in no refund.

This policy is to be implemented for degree-seeking graduate students in the following way: during the time between registration and the end of the fifth week, a student must inform his or her instructor and his or her department graduate committee chairperson of his or her intent to drop a course. After the fifth week of the quarter and before the last class day of the quarter, a graduate student may petition his or her department graduate committee chairperson in writing to request a drop under special circumstances. Should the department graduate committee chairperson approve such a request, a copy of the special petition goes to the appropriate college dean for his or her approval. Poor academic performance is not sufficient grounds for dropping a course. Graduate students who are not formally part of a graduate program are covered by the drop policy as it applies to undergraduates.

Change in Program Requirements

A candidate for a degree must either (a) meet the requirements set forth in the *Graduate Catalog* at the time of the student's initial registration in a graduate degree program, or (b) should the student elect to follow requirements of a later catalog, meet those later requirements in their entirety. In the event of program changes, departments will be expected to make appropriate adjustments to allow the student to fulfill the requirements of the initial program of study. If an extension of time beyond one quarter is granted, candidates will generally be expected to meet all requirements of the program at the time of the extension request to the Graduate Council. Requests for such extensions must incorporate a detailed explanation of the means employed to meet modifications in requirements enacted since the student's entry. This information will be considered by the Graduate Council as part of the approval process. This paragraph does not apply to students in the College of Osteopathic Medicine.

Change of Student Personal Information

All changes of student personal data must be reported to the Registrar's Office, Chubb Hall. Forms are available in the Office of Graduate Student Services or the Registrar's Office. Changes of name, social security number, and/or birth date must have a document verifying the correct information at the time the request is made.

Forms for reporting a change of home or Athens address are available in the Office of Graduate Student Services. The student is responsible for any University office communication sent to him or her at the last address reported to the Registrar's Office, Chubb Hall.

GRADUATE STUDENT RESPONSIBILITY

The student must assume responsibility for knowing University, college, and departmental regulations and for complying with all applicable procedures. In no case will a requirement be waived or an exception granted because a student pleads ignorance of the requirement or asserts that his or her advisor or other authority did not inform the student of the requirement. While the personnel of the Office of Graduate Student Services and the student's advisor will endeavor to aid in every way possible, the responsibility for meeting requirements stated in this catalog rests with the student.

LATE REGISTRATION AND LATE PAYMENT POLICY

Unless in the judgment of the registrar a student's registration has been delayed due to the convenience of the University, a late registration fee will be assessed upon each late-registering student beginning with the third week of each quarter.

The late fee is $40 the third week, $60 the fourth week, $80 the fifth week, and $100 the sixth week.

The last day to register with a late fee is the Friday of the sixth calendar week of the quarter.

A late payment fee would normally not be applicable since payment is a prerequisite to registration. However, in addition to other service charges, a $20 late payment fee will be assessed by the Bursar's Office on all checks returned by a bank after the payment deadline has passed.

WITHDRAWAL FROM THE UNIVERSITY

Application for withdrawal is made on a withdrawal form obtained from the Office of Graduate Student Services. When the request for withdrawal has been approved by the Assistant Vice President for Graduate Studies, the order is referred to the Office of Student Records, which grants an official withdrawal after it has been determined that all obligations to the University have been met. A refund of registration fees is made according to regulations.

A student who withdraws after the 14th day of any quarter will establish a *WP/WF* grade in each course. A student who fails to complete the work of a course and does not complete an authorized withdrawal will have an F reported for that course.

Students who have withdrawn from the University for medical reasons may not be reinstated until the Office of Graduate Student Services has received a written clearance from the Hudson Health Center.

TRANSCRIPTS

A copy of a student's records is issued by the Registrar's Office, Chubb Hall, as an official transcript. Transcripts are made only upon written request, with a $2 charge for each copy.

Unmet University financial obligations or pending disciplinary cases may result in a hold being placed on a student's academic record. A transcript will not be sent until the hold is cleared by the initiating office.

REPLACEMENT DIPLOMA

A notarized affidavit, attesting that the original diploma has been lost or destroyed, or a copy of a court order verifying a legal name change, or a copy of the official marriage certificate must be filed with the Registrar's Office at Ohio University. In the case of a legal name change, the original diploma must be returned.

Each affidavit requesting a replacement diploma must be accompanied by a $15 fee.

The replacement diploma will carry current titles and signatures of University officers. It will carry the notation "official replacement." Students should allow ten weeks for delivery.

ACADEMIC MISCONDUCT

All students, both graduate and undergraduate, must abide by the Ohio University Student Code of Conduct (see *Student Handbook*). Excerpts regarding academic misconduct are reproduced here.

Academic misconduct includes cases of cheating and plagiarism. Cheating implies dishonesty or deception in fulfilling academic requirements. A faculty member has the authority to grant a failing grade in cases of academic misconduct, as well as the discretion to refer the case to the director of Judiciaries. The director of Judiciaries, the University Hearing Board, and the University Appeal Board have the authority to take formal action against a student, including, but not limited to, suspension or dismissal from the University. However, the director of Judiciaries, the University Hearing Board, and the University Appeal Board have no authority to modify a grade given by a faculty member.

Dishonesty occurs in instances of furnishing false information to the University by forgery, alteration, or misuse of, among other things, University documents or records, furnishing the University a false written record or oral false statement, or furnishing false identification to a University official.

Plagiarism can take many forms, but in essence it involves the presentation of some other person's work as if it were the work of the presenter. This kind of deception has no place in the academic world.

Plagiarism will not be tolerated within the Ohio University community. Whenever plagiarism takes place, as determined by the judgment of a faculty member, or by the procedures of the Office of University Judiciaries, serious action will be taken against the student committing plagiarism. Such action may be failure of work undertaken; failure of the course; censure by the faculty member, department, or college involved; and/or formal action by the Office of University Judiciaries, which can include either suspension or dismissal from the University.

Whenever formal action is taken with respect to plagiarism, the student(s) involved, the faculty member, the department chair, and the student's dean should be notified of the action.

It is appropriate for each faculty member to point out each quarter, among the several introductory items of business related to the course, the nature of plagiarism and the range of punishments pertaining to such an offense. If a student's course grade is lowered by an instructor who has accused the student of plagiarism, and if the student wishes to appeal this grade, he or she may follow the usual appeal route through the instructor, chairperson, and dean. If satisfaction is not achieved through this process, the appeal may be taken to the Student Grievance Board.

If a student wishes to appeal an action—such as suspension or expulsion—taken by University Judiciaries or the University Hearing Board, he or she can appeal to the University Appeal Board.

RESEARCH USING HUMAN SUBJECTS

The investigator in any research involving human subjects at Ohio University is expected to conduct any and all such experiments in compliance with Ohio University Policy and Procedure 19.052, pp. 1-2.

In summary, this policy applies to research investigations involving human subjects conducted by faculty, staff, or students at, or under the auspices or financial support of, Ohio University. It is intended for biomedical and behavioral research, where such research might reasonably be expected to put the physical or psychological safety or health of the human subject at risk.

The purpose of the policy is to protect the rights and personal privacy of individuals; to assure a favorable climate for the conduct of scientific inquiry; and to protect the interests of Ohio University. Ohio University's policy on biomedical and behavioral research involving human subjects is in compliance with the requirements set forth in the National Research Act (P.L. 93-348) and the regulations on public welfare set forth in Part 46 of Title 45 of the Code of Federal Regulations (45 CFR 46).

For details concerning the scope and purpose of this policy and for information concerning procedures, see the *Ohio University Policy and Procedures Manual*, or contact the Office of Research and Sponsored Programs.

GRADUATION AND ANNUAL COMMENCEMENT EXERCISE

The student must apply for graduation through the Office of Student Records and pay the graduation fee by the date indicated in the University calendar. if the student fails to meet graduation requirements in that quarter, he or she must reapply for graduation and pay the graduation reapplication fee by the date indicated in the University calendar for the quarter in which graduation requirements will be met. All work to be applied toward meeting degree requirements must be submitted no later than the last day of classes of the quarter in which the student expects to graduate. Additional deadlines to be met by students writing theses or dissertations are available in the office of the dean of the college in which the student is enrolled.

The annual commencement is held at the close of spring quarter in June. Master's and Ph.D. degree recipients from the preceding winter, fall, and summer quarters are invited to attend, along with master's degree candidates for spring quarter and spring-quarter Ph.D. candidates. All Ph.D. candidates must be approved for graduation by their college dean before they can participate in the commencement exercise.

Academic attire with the appropriate hoods are worn by candidates at the commencement exercises. Candidates will make their own arrangements for purchasing the appropriate academic attire through the Office of Public Occasions.

Doctoral students can arrange for the purchase of a doctoral hood through the Office of Public Occasions.

◆ University Fees

Payment of all assessed fees at the times designated is prerequisite to official enrollment. Checks and money orders should be made payable to Ohio University in the exact amount of the fees. Postdated checks are not acceptable. Checks not paid upon presentation to the bank will automatically cancel any receipts given and result in assessment of penalties. It is important that the student retain all fee receipts.

Ohio University reserves the right to make, without prior notice, any fee adjustments that may become necessary. Graduate students carrying over eight hours are eligible to participate in the Monthly Payment Plan, which equalizes the academic year's fees into nine monthly payments.

QUARTERLY FEES

The comprehensive fee covers an instructional fee, a general fee, and a tuition surcharge for nonresidents. *See the contents of this catalog for the location of the schedule of academic fees.*

SUMMER SESSIONS FEES

See the *Summer Sessions Bulletin and Schedule of Classes* for complete details.

MISCELLANEOUS FEES*

Admission application filing fees—	
For a degree program	$25
For nondegree, workshops, transients	$15
For nondegree to degree status	$10
For change of major, or second master's	$10
Late registration and/or late payment fee (check quarterly *Schedule of Classes*)	
Duplicate official forms, fee receipts, bill statements, grade reports, etc.	$2
Graduate—	
Application for master's degree	$23
Application for Ph.D. degree	$50
Reapplication for master's or Ph.D. degree	$5
Transcript of record	$2

*All above fees are nonrefundable and subject to change without notice.

INSURANCE

Students who register for seven or more credits are required to carry student insurance or other comparable health insurance.

REFUND OF FEES

The official University policy on the refund of registration fees is (1) official withdrawal from the University prior to the first day of classes entitles the student to a refund of 100 percent; (2) withdrawal from the University during the first 14 days of the quarter (see the academic calendar) entitles the student to a refund of 80 percent (cost of 20 percent) if fees were paid in full. Students on the Monthly Payment Plan will have incurred a charge of 20 percent of registration fees with this amount being subtracted from their registration payments to determine refundable amount; (3) withdrawal from the University after the first 14 days of classes entitles the student to no refund; (4) any student withdrawing from the University while owing the University money is considered to be indebted to the University for that amount.

Students dropping hours by change order prior to or during the first 14 days of the quarter, when such changes result in a reduction of fees, are entitled to receive a 100 percent refund of the reduction. Changes made after the 14th day of the quarter will result in no refund. Refunds are issued 30 days after the date of withdrawal from the University. Questions about the above items should be referred to the Registrar's Office.

OHIO RESIDENCY

It is the responsibility of the student to report a change of address and/or residency from an Ohio resident to a non-Ohio resident at the Office of Student Records. If the student's residency has changed to an Ohio resident, he or she must file a residency petition with the Office of Graduate Student Services. No change of residency can be made until the residency petition has been approved by the Assistant Vice President for Graduate Studies. Questions concerning residency should be directed to the Assistant Vice President for Graduate Studies.

The residency rules described below were adopted by the Ohio Board of Regents, effective September 1, 1984. The rules are subject to change without notice by the Ohio Board of Regents or the Ohio General Assembly.

A. Intent and Authority

1. It is the intent of the Ohio Board of Regents in promulgating this rule to exclude from treatment as residents, as that term is applied here, those persons who are present in the state of Ohio primarily for the purpose of receiving the benefit of a state-supported education.

2. This rule is adopted pursuant to Chapter 119 of the Revised Code, and under the authority conferred upon the Ohio Board of Regents by Section 3333.31 of the Revised Code. Effective date: September 1, 1984.

B. Definitions

For purposes of this rule:

1. A "resident of Ohio for all other legal purposes" shall mean any person who maintains a twelve-month place or places of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability under Section 5747.02 of

the Revised Code, provided such person has not, within the time prescribed by this rule, declared himself or herself to be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.

2. "Financial support" as used in this rule, shall not include grants, scholarships, and awards from persons or entities which are not related to the recipient.

3. An "institution of higher education" as used in this rule shall mean any university, community college, technical institute or college, general and technical college, medical college, or private medical or dental college which receives a direct subsidy from the state of Ohio.

4. For the purpose of determining residency for tuition surcharge purposes at Ohio's state-assisted colleges and universities, "domicile" is a person's permanent place of abode; there must exist a demonstrated intent to live permanently in Ohio, and a legal ability under federal and state law to reside permanently in the state. For the purpose of this policy, only one (1) domicile may be maintained at a given time.

5. For the purpose of determining residency for tuition surcharge purposes at Ohio's state-assisted colleges and universities, an individual's immigration status will not preclude an individual from obtaining resident status if that individual has the current legal status to remain permanently in the United States.

C. Residency for subsidy and tuition surcharge purposes

The following persons shall be classified as residents of Ohio for subsidy and tuition surcharge purposes:

1. A dependent student, at least one of whose parents or legal guardian has been a resident of the state of Ohio for all other legal purposes for twelve consecutive months or more immediately preceding the enrollment of such student in an institution of higher education.

2. A person who has been a resident of Ohio for the purpose of this section for at least twelve consecutive months immediately preceding his or her enrollment in an institution of higher education and who is not receiving, and has not directly or indirectly received in the preceding twelve consecutive months, financial support from persons or entities who are not residents of Ohio for all other legal purposes.

D. Additional criteria which may be considered in determining residency for the purpose may include but are not limited to the following:

1. Criteria evidencing residency:
   - a. if a person is subject to tax liability under Section 5747.02 of the Revised Code;
   - b. if a person qualifies to vote in Ohio;
   - c. if a person is eligible to receive state welfare benefits;
   - d. if a person has an Ohio driver's license and/or car registration.
2. Criteria evidencing lack of residency:
   - a. if a person is a resident of or intends to be a resident of another state or nation for the purposes of tax liability, voting, receipt of welfare benefits, or student loan benefits (if the loan program is only available to residents of that state or nation);
   - b. if a person is a resident or intends to be a resident of another state or nation for any purpose other than tax liability, voting, or receipt of welfare benefits.

E. Exceptions to the general rule of residency for subsidy and tuition purposes

1. A person who is living and is gainfully employed on a full-time or part-time and self-sustaining basis in Ohio and who is pursuing a part time program of instruction at an institution of higher education.

2. A person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.

3. A person on active duty status in the United States military service who is stationed and resides in Ohio and his or her dependents shall be considered residents of Ohio for these purposes.

4. A person who is transferred by his or her employer beyond the territorial limits of the fifty states of the United States and the District of Columbia while a resident of Ohio for all other legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile, and as long as such person has fulfilled his or her tax liability to the state of Ohio for at least the tax year preceding enrollment.

5. A person who has been employed as a migrant worker in the state of Ohio and his or her dependents shall be considered a resident for these purposes, provided such person has worked in Ohio at least four months during each of the three years preceding the proposed enrollment.

F. Procedures

1. A dependent person classified as a resident of Ohio for these purposes and who is enrolled in an institution of higher education when his or her parents or legal guardian removes their residency from the state of Ohio shall continue to be considered a resident during continuous full-time enrollment and until his or her completion of any one academic degree program.

2. In considering residency, removal of the student or the student's parents or legal guardian from Ohio shall not, during a period of twelve months following such removal, constitute relinquishment of Ohio residency status otherwise established under paragraphs C.1 or C.2 of this rule.

3. Any person once classified as a nonresident, upon the completion of twelve consecutive months of residency, must apply to the institution he or she attends for reclassification as a resident of Ohio for these purposes if such person in fact wants to be reclassified as a resident. Should such person present clear and convincing proof that no part of his or her financial support is or in the preceding twelve consecutive months has been provided directly or indirectly by persons or entities who are not residents of Ohio for all other legal purposes, such person shall be reclassified as a resident. Evidentiary determinations under this rule shall be made by the institution which may require, among other things, the submission of documentation regarding the sources of a student's actual financial support.

4. Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification.

5. Any institution of higher education charged with reporting student enrollment to the Ohio Board of Regents for state subsidy purposes and assessing the tuition surcharge shall provide individual students with a fair and adequate opportunity to present proof of his or her Ohio residency for purposes of this rule. Such an institution may require the submission of affidavits and other documentary evidence which it may deem necessary to a full and complete determination under this rule.

◆ Financial Support

Two major forms of financial support for graduate students are associateships and scholarships. These are granted by the individual schools or departments, and application for this financial assistance is made as part of the application (see application forms included in the back of this catalog).

GRADUATE APPOINTMENTS

Over 900 graduate, staff, research, and teaching associateships are available for graduate students at Ohio University. Students who wish to pursue a master's or a doctoral degree are selected for these appointments on the basis of scholarly merit.

Graduate contracts normally become effective the first day of each quarter and normally end on the official closing date of the quarter. Individual schools or departments may, at their discretion, request that the newly appointed associates report for orientation up to a week prior to the beginning of the quarter.

The associateship provides a stipend for services as prescribed by the individual school or department and generally requires an academic course load of 15 graduate credits a quarter. The associateship usually includes a scholarship for the length of the contract. The stipends vary from academic area to academic area, but generally range from $5,000 to $9,000 for three quarters (i.e., from September to June) and $6,800 to $11,500 for a 12-month appointment. The student should contact the individual school or department for details on associateships and scholarships.

Graduate associates fulfill academic responsibilities and service as prescribed by the school or department. The service called for by the appointment usually entails administrative, teaching, or research duties typically performed for and under the supervision of a faculty member.

Graduate staff associates engage in duties varying from residence hall directorships to service in the library and University administrative offices. The academic course load is 9 to 18 graduate credits. Students work a maximum of 15 hours per week, and stipend and other policies are generally the same as for other graduate-contract appointees. These appointments are not funded from academic department resources.

Graduate teaching associates carry teaching responsibilities as prescribed by the school or department.

Graduate research associates engage in work on research projects as prescribed by the school or department.

Appointment of graduate resident directors and graduate assistant resident directors are made on the recommendation of the director of residence life and are available to single or married men and women. Compensation includes a furnished apartment and board (when the dining halls are operating) for the appointee (and for his or her family, if married) and a stipend of $9,600 plus a tuition scholarship for graduate resident directors. Graduate assistant resident directors will have the same compensation and a stipend of $3,600 plus a tuition scholarship. The appointment requires a payment of $231 per quarter general fee. The graduate resident director and graduate assistant resident director supervise functions of the residence hall. The academic course load is 9 to 13 graduate credits. Application for these appointments is made by letter and submission of the applicant's vita to the director of residence life.

Scholarships are granted for the summer quarter to those students who have an associateship for the spring quarter preceding or the fall quarter following the summer quarter. The student must carry a course load of 15 hours and pay the general fee of $231 for the summer quarter.

The associateship will be discontinued if a student's grade-point average as a graduate student at Ohio University falls below a 3.0 (on a 4.0 scale). Some schools or departments may require a higher average.

Graduate students seeking continuation of stipend support must follow all departmental policies and procedures pertaining to renewal of that support. Additionally, Graduate Council guidelines state that graduate students holding graduate appointments written for an academic year must receive notice of renewal or nonrenewal of that appointment no later than the end of the spring quarter. This provision does not apply to contracts terminated early or not renewed for academic or service performance reasons. In such cases, no prior notification is required.

Graduate students holding graduate contracts written on a quarterly basis must receive notice of renewal or nonrenewal of contract at least one quarter before the end of that contract period. Graduate students holding spring quarter appointments must be notified no later than the end of the spring quarter of renewal or nonrenewal for fall quarter. This provision does not apply to contracts terminated early or not renewed for academic or service performance reasons. In such cases, no prior notification is required. Notification on summer quarter appointments can be made as early as practicable.

TIME LIMITS

Time limits for financial support of graduate students through associateships, fellowships, or scholarships are determined by the schools or departments responsible for the individual programs. In no instance, however, will University support be provided to a student who has enrolled in more than 260 hours of graduate-level credit, defined as graded course credit taken at Ohio University and credit earned for work performed prior to admission to Ohio University. This constraint does not apply to financial assistance provided through research grants or other non-University funding sources.

TRAINEESHIPS AND FELLOWSHIPS

Ohio University has a limited number of named fellowships such as the Hiram Roy Wilson Fellowships in Biological Sciences, Chemistry, and Environmental and Plant Biology. In addition, the following fellowships are awarded by the associate provost for graduate and research programs, with the advice of the Graduate Council: The John Cady Graduate Fellowship, The Donald Clippinger Graduate Fellowship, The Claude Kantner Graduate Fellowships, and The Anthony Trisolini Graduate Fellowship. Stocker Fellowships are available in the College of Engineering and Technology. The University also participates in available federal fellowship programs.

SCHOLARSHIPS

Scholarships are available in conjunction with an associateship or as a separate award. These are granted on a competitive basis to incoming graduate students who have maintained high undergraduate averages, or to graduate students who have maintained at least a 3.0 graduate grade-point average. These scholarships require full-time study (15 graduate credits per quarter) and payment of the $231 general fee each quarter. Information may be obtained by contacting the graduate chair of the student's academic area.

Scholarships are granted for the summer quarter to those students who have a scholarship for the spring quarter preceding or the fall quarter following the summer quarter. The student must carry an academic course load of 15 hours and pay the general fee of $231 for the summer quarter.

The scholarship will be discontinued if a student's academic average as a graduate student at Ohio University falls below a 3.0 (on a 4.0 scale). Some schools or departments may require a higher average.

OFFICE OF STUDENT FINANCIAL AID AND SCHOLARSHIPS

Financial aid available to graduate students through the Office of Student Financial Aid and Scholarships consists of loan assistance and employment opportunities.

Need-Based Assistance

Graduate students are eligible to apply for the following types of need-based federal financial aid: (1) the Federal Stafford Student Loan (formerly the Guaranteed Student Loan), (2) the Federal Perkins Loan, and (3) Federal Work Study, by completing the Free Application for Federal Student Aid (FAFSA). April 1 is the first-priority deadline date that has been set by the Office of Student Financial Aid and Scholarships (OSFAS) for consideration for Campus-Based Aid: the Federal Perkins Loan and Federal Work Study (FWS). These funds are awarded differently from the Federal Stafford Student Loan in that the funds are sent directly to the institution to be awarded to the most needy students directly by the OSFAS. Funding for these programs is limited, and late applicants (after April 1) most likely will not receive an award.

Cost of Attendance

Each year, the Board of Trustees at Ohio University determines the fixed costs (tuition and fees, plus an out-of-state surcharge, and room and board rates) for graduate students who live on campus. Variable costs consist of books and supplies, transportation, personal, and miscellaneous expenses. Variable expenses are estimated by the OSFAS and are based on the Consumer Price Index (CPI), on local survey data of local housing (off-campus apartments), and on estimated food costs. Allowances can be made for child care costs for preschool-aged children upon request by the student. Students must provide documentation in writing to the OSFAS for individual consideration. The combined fixed and variable costs make up the student's total cost (budget) for the academic year (three quarters).

Determining Eligibility

Graduate students are considered independent. Students and their spouses (if applicable) are expected to assist in meeting their educational costs. The expected contribution is calculated from the previous year's earnings, untaxed income, benefits, and a percentage of personal savings and assets. The following Financial Aid Equation is used to determine financial need:

Cost of Education (budget)
(–) Minus Expected Family Contribution

= Financial Need

Award Package

After the FAFSA need analysis and other documents have been received and reviewed for accuracy (verified if applicable), an award offer is made to all eligible applicants. The award package can be a combination of gift assistance (fellowships, scholarships, graduate teaching/research associateships, etc.), federal loans, and employment to offset costs. Not all students receive all types of aid, but in general, the OSFAS attempts to balance "gift aid" (grants and scholarships) with "self-help" (employment and loans) within the limits of available funds and the student's eligibility. All gift aid received from all other sources must be reported when applying for the Federal Stafford Student Loan to accurately determine eligibility. Students who apply before the April 1 first-priority date are likely to receive more attractive packages than those who apply later.

Notification of Aid Offers

A written notification of an award offer or denial will be sent as appropriate to all applicants. All award notifications ("Notice of Award and Acceptance Agreement") will be sent via mail to the student's permanent address to be signed and returned by a designated date. Failure to accept the award by the date requested will result in an automatic cancellation. Applicants who are denied "traditional sources" of aid are encouraged to continue in the process for consideration for supplemental sources of assistance such as campus employment (CSES) and the Federal Supplemental Loan for Students (SLS).

Award Disbursements

Federal aid recipients must be officially enrolled through the Registrar's Office, be free of any previous outstanding debts, and must fulfill all other requirements (financial aid transcripts, verification of the FAFSA data, etc.) before disbursement of aid.

Disbursement of funds will vary depending on the type of financial aid awards offered. The Federal Perkins Loan and the Federal Stafford Student Loan must have the appropriate endorsements and promissory notes signed before the aid can be disbursed or checks issued. Federal Work Study awards are not credited to the student's account because the award must be earned before being paid. Students will receive an FWS payroll check every two weeks for the hours worked and approved by the hiring department for the pay period. Total financial aid credits greater than the University charges will result in an overage check being generated in the amount of the excess funds after the 14th day of enrollment. Overage checks will be given to students to assist them in meeting other educationally related expenses. Consult the *Schedule of Classes* for more detailed information concerning actual dates of disbursement for each quarter.

Eligibility Requirements

All federal campus-based aid and Federal Stafford Student Loan recipients must be enrolled a minimum of 5 credit hours.

All Title IV federal aid recipients must maintain satisfactory academic progress as defined by the OSFAS and the University.

All federal aid recipients must comply with OSFAS's procedures for adjusting overawards if the total federal aid received exceeds the financial need.

Satisfactory Academic Progress: Need-Based Assistance

All federal aid recipients who received assistance for the first time starting July 1, 1987, must earn a minimum of a 3.0 grade-point average by the end of the second academic year (spring quarter) of enrollment. There are three elements to the Satisfactory Academic Progress requirements that must be met: (1) maximum time frame during which a degree or certificate must be granted, (2) minimum cumulative grade-point average of a 3.0, and (3) minimum credit hours earned for the appropriate enrollment status (half-time, three-fourth time, or full-time).

Student Loans

Student loans are playing an increasingly significant role in financing post-secondary education. Because of the favorable terms and conditions of educational loans, students should not be afraid to borrow as an investment in their future. On the other hand, loans represent debts that must be repaid, and failure to repay can result in substantial penalties to the student. The federal government has expanded the limits on these vital loan programs to assure that students will have access to and a choice among educational institutions.

The Federal Perkins Loan (formerly National Direct Student Loan) is a federal loan for undergraduate and graduate students enrolled for at least six credit hours at Ohio University. Repayment and interest accrual begins nine months after a student graduates, leaves school, or drops below half-time enrollment as defined by the University. The interest rate is currently five percent, and loans can be included under the loan consolidation provisions contained in the Reauthorization Act of 1986. A promissory note must be signed by the student before the student's account can be credited or a check disbursed.

The Federal Stafford Student Loan (formerly Guaranteed Student Loan) is a federal loan for undergraduate and graduate students enrolled at least half-time in a certificate or degree-granting program at a participating postsecondary institution. This program requires students to complete a separate application. ALL APPLICANTS FOR THE FEDERAL STAFFORD STUDENT LOAN MUST FILE A FREE APPLICATION FOR FEDERAL STUDENT AID (FAFSA) TO DETERMINE ELIGIBILITY.

The Federal Stafford Student Loan maximum for graduate students is $7,500 per academic year for loans made prior to Oct. 1, 1993. For loans made after Oct. 1, 1993, the maximum amount is $8,500 per academic year. To qualify for the Subsidized Federal Stafford Student Loan, students must demonstrate an unmet need after other types of assistance such as the following: (1) tuition scholarships, (2) fellowships, (3) research and teaching associateships, and (4) graduate research associateships have been considered. Graduate students must obtain specific information, requirements, and procedures from the appropriate academic departments.

Eligibility for the Federal Subsidized Stafford Student Loan is determined by the Federal Methodology need analysis on the FAFSA and must not exceed the difference between the cost of education (budget) minus the expected family contribution and other aid estimated to be made available. Students who do not qualify for the maximum Subsidized Stafford Student Loan may apply for the Unsubsidized Stafford Loan (interest is not subsidized while in school). The student is always responsible for the interest, and if the student elects not to pay the interest while attending school, the interest will accrue on the loan principle. New borrowers will have a variable interest rate. Interest rates (for loans made for periods of enrollment after July 1,1988) will be 8 percent for the first four years of repayment and 10 percent for the fifth and subsequent years of repayment.

Loan repayment may be deferred for certain conditions, and loan consolidation is possible under the Reauthorization Act. Loan checks are made co-payable to the student and the University and are sent to the University in two or three disbursements by the lenders. All first-time borrowers at Ohio University must attend an entrance interview before receiving their first disbursements.

The Federal Supplemental Loan for Students (SLS) is an additional source of assistance for graduate students. Students are eligible to apply for up to $10,000 per academic year. Repayment of interest and principle begins 60 days after the first check has been issued if a deferment has not been approved by the lender. The interest rate is variable for each academic year. Applications may be obtained from a participating lender. Loan checks are made payable to the student and the University and sent to the University in two or three disbursements. All first-time borrowers at Ohio University must attend an entrance interview before receiving their first disbursement.

Ohio University Loans are institutional funds made available to students on a temporary basis to provide cash while waiting for disbursement of financial aid or earnings from employment. A one-page loan application must be completed and approved prior to the issuing of a loan check. Students who are in default on previous loans and/or federal loans are not eligible to receive an institutional loan. Borrowers who are not aid recipients are charged a $4 processing fee and an interest rate of 9%. All students must have a guaranteed source of repayment within 30 or 60 days from the time the loan is issued.

Employment Opportunities

Federal Work Study (FWS) is a need-based federal work study program to provide part-time employment for graduate students who need additional financial assistance to attend college. The federal government stipulates that jobs available under the FWS program may not displace presently employed persons or fill regular job openings including student employment; therefore, FWS jobs are used as a supplemental source of assistance by institutions. Whenever possible, FWS recipients are placed in positions which coincide with their career interest or academic majors. Students are paid at least minimum wage. Most students are eligible to work 10 hours per week and are paid by check every two weeks. Students must report to the OSFAS at the opening of the first quarter they have been awarded FWS to receive their work assignments.

Centralized Student Employment Services (CSES) was established by Ohio University to provide job opportunity information for all students in a central location on campus in the OSFAS. The service assists in hiring students for part-time jobs, maximizes employment opportunities and job placement, and coordinates student employment policies and procedures.

The OSFAS serves as an employment clearinghouse for job posting and referrals for all hiring departments at Ohio University (Athens campus) and for private (off-campus) employers, as well. All employment opportunities for students are posted when new positions are available and/or when vacancies occur. Positions to which students are returning will not be posted.

Graduate Assistance

Graduate students (master's and doctoral candidates) may be eligible to receive additional financial assistance from their respective academic departments and/or colleges by contacting them directly. Recipients of graduate stipends in the form of fellowships, scholarships, and/or research and teaching associateships will be reported to the Office of Student Financial Aid and Scholarships by the Office of Graduate Appointments. All tuition scholarships received will be included as part of the aid package for federal need-based aid, if the student is eligible. Graduate students who receive a Federal Stafford Student Loan (formerly GSL) for summer quarter and later receive a graduate stipend may become overawarded according to federal guidelines. To avoid an overaward, applicants are encouraged to notify the OSFAS of all additional resources (current and estimated when possible) when applying for the Federal Stafford Student Loan. All overawards will be adjusted by the OSFAS by reducing the loan first and Federal Work Study as a last resort.

Financial Aid Services

Walk-in services are available to all students on a daily basis during regular hours. Students may choose to meet with the administrator on call or he or she may request to schedule an appointment with his or her alphabetically-assigned counselor (counselor assignments are made alphabetically by the student's last name). Some of the services provided by the counselor are: (1) confirmation of financial aid for preregistration, (2) a review of financial need and eligibility, and (3) a review of policies and procedures for the different types of financial aid programs.

Federal regulations and/or institutional policies are subject to change without prior notice. The OSFAS will attempt to keep students updated as necessary through various media on campus and via written notices. Therefore, it is important that all aid applicants update their permanent and local addresses with the Registrar's Office as necessary to avoid delays that may be costly to the applicant.

More detailed information on any of the financial aid programs may be obtained by contacting the Office of Student Financial Aid and Scholarships, 020 Chubb Hall, or by calling 614-593-4141 between 9 a.m. and 4 p.m.

◆ Degree Requirements

STANDARDS OF WORK

Conferral of either the master's or Ph.D. degree requires at least a B (3.00) grade-point average. The grade-point average in formal coursework will be computed separately from the average in research, thesis, and dissertation credits to determine eligibility for graduation. At least a B (3.00) grade-point average is required in each category. No grade below C (2.00) can be used to satisfy any degree requirement. A department may establish more rigorous standards. All graduate students are expected to maintain at least an overall B (3.00) grade-point average on a continuing basis. Should any student achieve less than an overall B (3.00) grade-point average, the office of the dean of the college in which the student is enrolled will solicit a written statement from that student's departmental graduate committee to justify the student's continuation in the program.

GRADING SYSTEM

Academic work at Ohio University is evaluated on the following grading system: a grade of A equals 4.00; A– equals 3.67; B+ equals 3.33; B equals 3.00; B– equals 2.67; C+ equals 2.33; C equals 2.00; C– equals 1.67; D+ equals 1.33; D equals 1.00; D– equals 0.67; and F equals 0.00. In addition to letter grades, the following grades also may be recorded. Credit (CR) is usually awarded for satisfactory completion of seminars, research projects, and thesis or dissertation credit. A student may receive a grade of Progress (PR) in courses which are not yet complete or which will extend over more than one quarter. Grades of CR or PR are not used in computing the student's grade-point average. An Incomplete (I) indicates that the student has made progress in a course but has not finished the work required to receive a letter grade. An I symbol is not counted in quarter hours attempted, hours earned, or quality points until a letter grade is reported. If neither a letter grade nor notification from the instructor for an extension of time is received by the Office of Student Records, the I symbol reverts to an F letter grade six weeks into the next quarter the student is enrolled. Requests from the instructor for an extension of time beyond six weeks cannot exceed the end of the next quarter enrolled. Any remaining I symbols will be calculated as F in determining eligibility for graduation.

Determination of appropriate use of letter grades, CR, PR, or I is made by the department and is recorded in the Office of Student Records.

A grade of NR means that the instructor has not submitted a grade, or that there has been a processing error. The student should check with the instructor; if a grade was in fact submitted, the student should go to the Office of Student Records to learn what is necessary to clear up the problem.

An administrative incomplete (I)* is given by the Office of Student Records when a student fails to drop officially a course for which he or she has registered. Until removed, an administrative incomplete is computed as an F in calculating the grade-point average.

THE MASTER'S DEGREE

A minimum of 45 graduate credits is required for conferral of the master's degree. A student may not have more than 12 credits with a CR grade exclusive of research and thesis hours applied to his or her minimal credit requirements. Additional credits may be required by individual departments. A program of study approved by the student's advisor and by the departmental graduate committee should be developed early in the student's first graduate quarter to ensure that all degree requirements are satisfied in the most efficient manner possible. Since graduate work implies advanced study and some degree of specialization, a certain amount of undergraduate preparation in a subject or field of study is presupposed before graduate study may be undertaken in that subject or field.

In most departments a minimum of 27 undergraduate credits is required in the major area. The student is referred to the requirements listed by departments. The nature of Ohio University's master's degree programs may make it appropriate for students enrolled in certain programs to spend a given period of time in residence on the Athens campus. It is the student's responsibility to ascertain whether a period of residence is required in the student's major field and to plan a program of study accordingly by consulting with his or her advisor and departmental graduate committee. A comprehensive examination may be required, the nature and timing of which is determined by the department.

Thesis Requirement

A student in a thesis program prepares the thesis under the guidance of his or her thesis director on a subject in the field of his or her major work.* The thesis provides an opportunity for the student to formulate and express the results of research and study. The thesis requirement may be met by the presentation of the results of a creative activity in literature, music, fine arts, or industrial arts, together with a written essay indicating the purpose, procedure, problems, and bibliography involved in the work. Each department will prescribe the specific style manual to be followed by its students. The student and his or her thesis director are responsible for the maintenance of accepted standards of grammar, sentence structure, punctuation, form, and scholarly style in the thesis. A pamphlet, "Format for the Presentation of Thesis and Dissertations," is available in the college deans' offices. This booklet contains regulations regarding type, margins, quality of paper, and other aspects, as well as detailed directions for submitting the finished thesis. Every student writing a thesis must obtain from his or her dean's office the current "Format" and the printed list of quarterly deadlines for graduation.

*See Restricted Publication of Theses or Dissertations.

Oral Thesis Examination

An oral thesis examination is required of all students in a thesis program. The examining committee is composed of the director of the thesis as chair and two or more additional faculty members. The student and the thesis director, in consultation with members of the examining committee, set a time and place for the examination. Final copies of the thesis must be presented to members of the student's examination committee *at least two weeks* before the date of the oral examination to allow adequate review of the manuscript. Results of the examination are reported to the Office of Graduate Student Services and the Office of Student Records as soon as final approval of the thesis is given.

Nonthesis Option

Several departments have master's degree programs with nonthesis options. In consultation with his or her advisor, the student should carefully consider career goals in deciding between a thesis or nonthesis option. The student should be aware that many academic areas regard a nonthesis master's program as a terminal degree program.

Transfer of Credit

A maximum of 12 quarter hours of graduate credit may be transferred from an accredited university to a master's degree program at Ohio University, providing the following conditions are met: the credits to be transferred must have been designated as graduate credit at the institution where taken. The credits must be letter graded B or better and must have been earned in the past five years. The credits must be applicable toward an advanced degree at the institution where taken and must have been earned in courses taught by members of that institution's graduate faculty. Credit for courses taken by correspondence is not accepted. Any request for transfer of credit must be recommended by the student's advisor and departmental graduate committee before final review and acceptance by his or her dean's office. No letter grades will appear on the transcript for transferred courses nor will they be calculated in the student's grade-point average.

Time Limit for the Master's Program

The maximum time allowed between the date when a student first initiates graduate study toward a master's degree and the date when the requirements for the master's degree are completed is six calendar years *except* that any master's degree program which requires more than 60 hours may increase the six-year time limit to seven years, with the approval of the Graduate Council. Students must check with the Office of Graduate Student Services or their graduate department to verify the time limit for their graduate programs. Students who do not complete their requirements within the time limit may be permitted to continue graduate study only if exceptional circumstances are associated with the delay in progress.

The dean of the student's college may grant a one-quarter, one-time extension. If circumstances require an extension of time beyond the one-quarter dean's extension, the student must apply for re-admission to the program. The application for re-admission must be reviewed by the graduate committee of the program and the dean of the college. The criteria for re-admission should be the currency of the student's courses, project, or thesis. The program may require retaking or adding particular courses, updating the project or thesis, taking additional practicum or internship hours, or fulfilling any degree requirements that may have been added to the program since the initiation of the student's program. If re-admission is approved, the specifications for re-admission must be presented in writing to the student with a copy of those specifications placed on file in the Office of Graduate Student Services. These time limit guidelines are effective for those students initiating a graduate program during or after fall quarter 1993.

Second Master's Degrees

A student who wishes to earn a second master's degree at Ohio University must make formal application for admission to the department in which the second master's degree is sought and pay an application fee of $10. In addition, the student must prepare a program of study for each master's degree by listing the course number, name, and number of credits. No more than 12 credits from one master's degree program may be used to satisfy degree requirements in a second master's degree program. Each program of study must be signed by the departmental graduate committees in both departments in which master's degrees will be earned. The student must then submit the programs of study to the Office of Graduate Student Services for final approval. *Any admission status given in a second master's degree program must be regarded as provisional until the programs of study are approved.*

THE DOCTOR OF PHILOSOPHY DEGREE

The Ph.D. is granted on the basis of evidence that the candidate has achieved a high level of scholarship and proficiency in research rather than solely on the basis of successful completion of a prescribed amount of coursework. The student's competence and ability to work independently and to write creatively are established by qualifying and comprehensive examinations and the quality of a dissertation submitted as an account of his or her original research.

Program of Study and Advisory Committee

The graduate committee of the student's department will assign an advisor and an advisory committee who must approve the proposed program of study for the degree. Graduate work completed at another university will be considered by the departmental graduate committee and the student's advisory committee in the development of the student's program of study.

Typically, when the dissertation proposal is nearing approval, the departmental graduate committee will forward to the office of the dean of the college in which the student is enrolled a recommendation for appointment of a dean's representative, together with the names of other dissertation committee members and the title of the student's dissertation. The committee shall consist of at least three members representing the range of content in the student's program of study, in addition to the representative from the dean's office.

Comprehensive Examination

When coursework is virtually completed, and upon the recommendation of the advisory committee, the student takes a comprehensive examination, which is given to establish his or her mastery of the fields of specialization and readiness for advanced research. The results of the examination must be reported within *one week* to the office of the dean of the college in which the student is enrolled, on a form provided by the dean's office.

A copy of this form should be sent to the Office of Graduate Student Services to be included in the student's official academic file.

Scholarly Discipline Requirement

The Ph.D. degree by definition is research-oriented, and each department shall determine the auxiliary research competencies needed by candidates for the Ph.D. degree. Competence will be determined by standards and methods established by the individual departments. Each student who expects to demonstrate proficiency in one of the scholarly disciplines in which examinations are arranged by his or her dean's office (e.g., statistics, computer science, foreign language, etc.) must file an appropriate *Intent Form*. These forms are available from and should be filed with the office of the dean of the college in which the student is enrolled. The student must be registered for a minimum of two hours in the quarter in which the examination is taken.

The French, German, Russian, and Spanish proficiency examinations of the Educational Testing Service are given at Ohio University several times during the year. Information and application forms may be obtained at the office of the student's dean, where the $5 nonrefundable registration fee is paid.

Academic Residency Requirement

Normally, at least three academic quarters of the doctoral program shall be in continuous residence on the Athens campus of Ohio University in an institutional full-time status (registration for 15 graduate credits). Students who receive Ohio University stipend support are considered to have instructional full-time status by registering for nine or more graduate credits. For some programs, the residency requirement can be fulfilled a third way. A student not receiving stipend or scholarship support may be granted the option of completing residency requirements for the Ph.D. by enrolling in 9 quarter hours of coursework per quarter for three consecutive quarters if concurrently employed in a full-time professional position, defined as one in which the experience contributes directly to the student's program. This option must be approved by the student's advisor, the department/school graduate committee, and the department chairperson/school director. A written justification of how the experience gained in the position is directly and educationally related to the student's professional goals and the goals of the program and why this experience alone or combined with other planned experiences should be used to satisfy residency is required.

The written justification must be submitted to the *student's advisor prior to consideration of the request.* The continuous residence requirement applies to the period of graduate study following the completion of the master's degree or the completion of at least 45 graduate credits.

Admission to Candidacy

Admission to candidacy is achieved after the student has completed the following steps: (1) formation of the dissertation committee (including the dean's representative) which may be the same as the student's advisory committee; (2) approval of the research proposal by this committee; (3) successful completion of the comprehensive examination; and (4) satisfaction of all required scholarly disciplines.

Forms for indicating completion of the above are available from and are filed in the office of the dean of the college in which the student is enrolled. A student will not be permitted to schedule the oral examination of the dissertation until all requirements for admission to candidacy have been met.

A copy of the student's admission-to-candidacy letter should be sent to the Office of Graduate Student Services for inclusion in the student's official file.

Dissertation

A dissertation, the scholarly account of research in the new area of knowledge, is submitted by each candidate.* Each department will prescribe the specific style manual to be followed by its students. A pamphlet, "Format for the Presentation of Theses and Dissertations," is available in the deans' offices. This booklet contains regulations regarding type, margins, quality of paper, abstract, and other aspects, as well as detailed directions for submitting the finished dissertation to the office of the dean of the college in which the student is enrolled. Every degree candidate must obtain from his or her dean's office the current "Format" and the list of quarterly deadlines for graduation.

One copy of the dissertation is submitted to University Microfilms International for editing and microfilming, and will be made available for use by interlibrary loan. A copy of the dissertation abstract is published in *Dissertation Abstracts* by University Microfilms International.

A copy of the dissertation abstract should be sent to the Office of Graduate Student Services for inclusion in the student's official file.

Copyright

Dissertations can be copyrighted at the time the manuscripts are sent to University Microfilms International. Arrangements can be made through the library for this service. Students should be aware that under current copyright procedures, microfilming by University Microfilms International constitutes publication. The author may lose the ability to obtain a copyright if the dissertation is not copyrighted at the time of submission to his or her dean's office. For further information, contact the Office of the Director, 512 Alden Library.

Oral Dissertation Examination

An oral dissertation examination is required of all candidates for the Ph.D. degree. The examining committee shall be composed of the student's entire dissertation committee (including the representative of the dean of the college in which the student is enrolled), unless otherwise specified by the associate provost for Graduate and Research Programs. Final copies of the dissertation must be presented to members of the examining committee *at least two weeks* before the date of the oral examination to allow adequate time for review. The final arrangements for the examination shall be completed through the office of the dean of the college in which the student is enrolled *at least 10 days* prior to the examination. Details of the examination, including time and place, will be sent to the examiners and to the student from his or her dean's office.

The Office of Graduate Student Services should be notified of the date that the student passed the oral examination for inclusion in the student's official file.

Time Limit for Ph.D. Program

The doctoral program of study must be completed within seven calendar years of the date of its initiation as determined by the individual department and recorded in the Office of Graduate Student Services.

Students who do not complete requirements for the degree within the given period may be permitted to continue in graduate study only if exceptional circumstances are associated with the delay in progress.

The dean of the student's college may grant a one-quarter, one-time extension. If circumstances require an extension beyond the one-quarter dean's extension, the student must apply for re-admission to the program. The application for re-admission must be reviewed by the graduate committee of the program and the dean of the college. The criteria for re-admission should be the currency of the student's (1) knowledge of the required work, (2) research literature, and (3) research methods and techniques. The program may require additional coursework, retaking the oral/written comprehensive examination, changing or updating the dissertation, or fulfilling any degree requirements that may have been added to the program since the initiation of the student's program. If approved for re-admission, the specifications for re-admission must be presented in writing to the student with a copy of those specifications placed on file in the Office of Graduate Student Services. These time limit guidelines are effective for those students initiating a graduate program during or after fall quarter 1993.

Restricted Publication of Theses or Dissertations

The University does not accept theses or dissertations containing material developed as part of a research project if the thesis or dissertation is restricted from publication. Publication, for this purpose, includes depositing the manuscript with the office of the dean of the college in which the student is enrolled and with the department, cataloging by the Alden Library, and microfilming and distribution by University Microfilms International.

However, upon the student's written request to his or her dean's office, publication may be delayed up to a maximum of 12 months if, in the judgment of the office, the data upon which the thesis or dissertation is based are proprietary and not available in the public domain. Request for delay must be submitted by the student, with the formal approval of the student's advisor, at least one academic quarter prior to the normal date of publication of the thesis or dissertation.

For further information, consult Ohio University Policy and Procedure #19.051.

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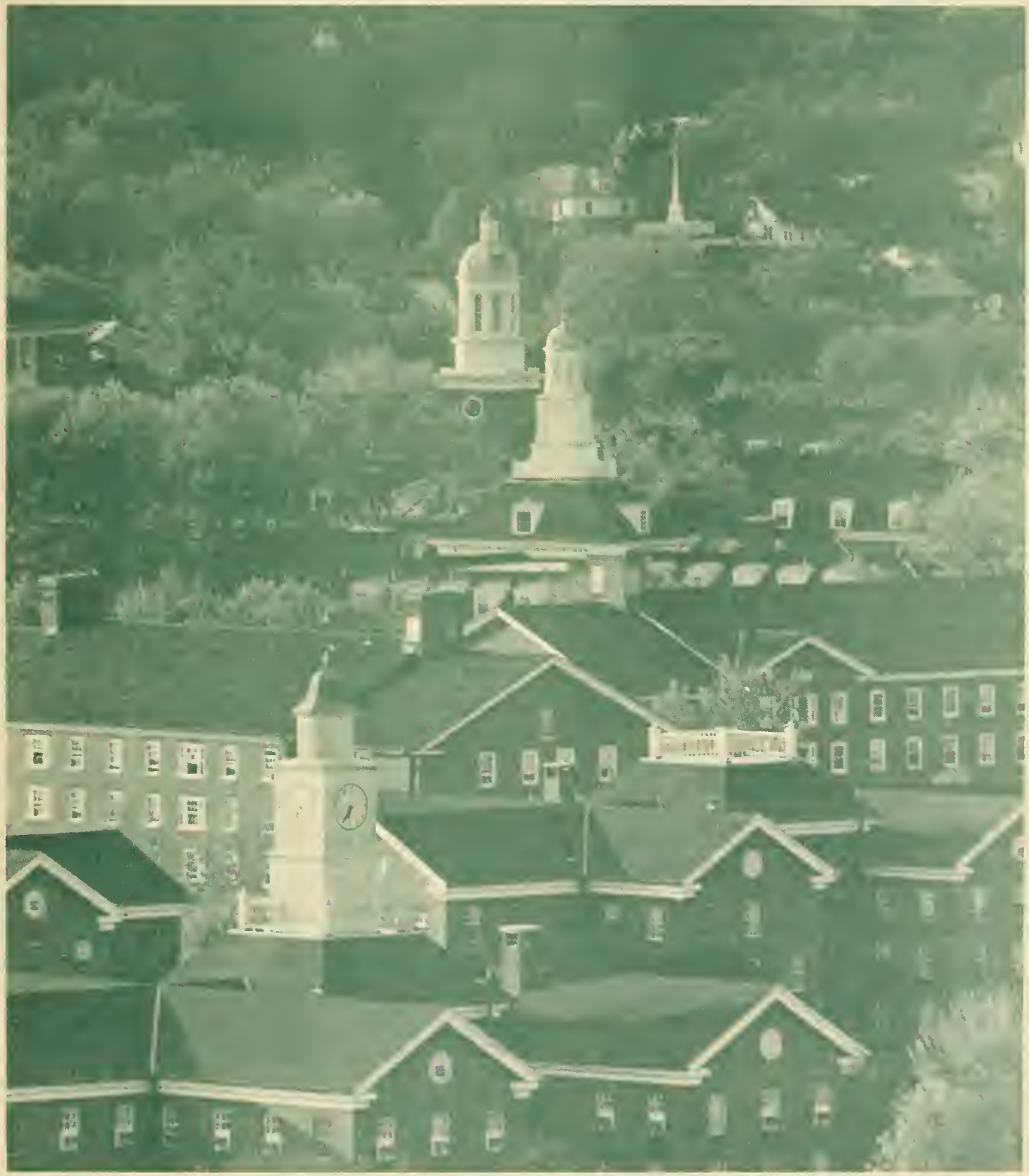
*See Restricted Publications of Theses or Dissertations section.

Areas of Instruction



Areas of Instruction

The programs and requirements described in this catalog are necessarily subject to change without notice at the discretion of Ohio University.

◆ General Information

Catalog Number

The catalog number indicates the student classification for which the course is intended. Courses numbered 500-699 are for master's level students; courses numbered 700-899 are for post-master's or doctoral-level students. No graduate credit is awarded for any work taken below the 500 level.

The italicized information following some course descriptions gives the following information: faculty name; quarter offered (*F - fall, W - winter, Sp - spring, Su - summer*); frequency with which the course is offered (*A* - alternate years, *Y* - yearly, *D* - on demand); last year in which the course was offered. For example, *Staff; Sp; D; 1993* means the course is taught by various members of the department on demand during spring quarter only and was last offered in 1993.

Credit and Prerequisites

Credit for a course is indicated by the number or numbers in parentheses following the course title.

In a course carrying variable credit, the credit may be expressed like this: (1-4), indicating that one credit is the minimum and four credits the maximum amount allowed for the course in one quarter. A student may enroll for a course with variable credit any number of times and for any number of credits, within the quarter limit, provided the total registration for the course does not exceed the maximum credit indicated in the course description. Departments may limit the number of hours counted in satisfying degree requirements.

Course prerequisites are indicated at the beginning of course descriptions following the abbreviation, "Prereq." A student who completes an advanced course may not subsequently enroll in a prerequisite course for credit.

Courses described in this catalog are for graduate credit only; students taking these courses must have graduate standing as a prerequisite for enrollment. See "Undergraduates Taking Graduate Courses" at the front of this catalog for further information.

Class Schedule

A schedule of classes is available each quarter from the Registrar's Office.

Further Information

For further information on any of the graduate programs, please write to the department graduate committee.

■ AFRICAN STUDIES

(See International Affairs)

■ AFRO-AMERICAN STUDIES

Although Afro-American Studies does not offer an academic program leading to a graduate degree, it does offer several graduate courses that enable students to get a minor concentration in the Afro-World experience. The courses provide a broad interdisciplinary approach to the black experience and include the social sciences, communication, education, psychology, and the arts and humanities. Several courses contribute to degree programs in African and Latin American Studies. Graduate students pursuing degrees in communication, education, international studies, health sciences, sociology, history, political science, and philosophy will find a minor emphasis in the Afro-World experience to be useful.

501A Images of Blacks (4)
Examines the sources and the effects of the dominant images of blacks that have pervaded American culture—bucks, coons, buffoons, improvident, children, devoted Christians, etc.—with a view to showing how they relate to slavery and the subsequent exclusion of blacks from the mainstream of American life. Also examines alternative images. Materials for the course will be drawn from a variety of areas—literature, sciences, and pseudosciences.
Rose.

530 Social Theories of Underdevelopment (5)
Systematic review of problems of social change in developing areas from multidisciplinary point of view. Attention to problems of agrarian reforms, urbanization as social process, regional disparities within framework of single nation state, inter alia. Comparative analysis of problems of social development undertaken typologically.
Rhodes.

531 Third World Ethnic Politics (5)
Review of various theories of race. Critique of diverse definitions of ethnic groups. Attention to problem of ethnicity in international arena. Cross-national comparisons made of ethnic processes in developing countries, vis a-vis ethnic processes in U.S., Western, and Eastern Europe.
Rhodes.

532 Third World National Movements (5)
Comparative study of varieties of national oppression. Questions of ethno-nationalism, clerical nationalism, and other forms of response to oppression reviewed. Due attention to various notions of Pan Africanism, and Black Nationalism in U.S., Africa, and Latin America.
Rhodes.

540 The Black Child (5)
In-depth study of black child—impact and effects of growing up in America. Specifically, course will deal with effects and role of school and family in creative adjustment of black child in predominantly white society.
Childs.

582 The Black Family (5)
Black family in America and its important role in development of ethnic differences, strengths, and strategies.
Childs.

691 Professional Seminar (1-15)
Prereq: perm. For student who wishes class which involves contact hrs and in which student will participate in class discussion and perform required class assignments. If, under this course number, student enrolls in an upper division undergraduate course, student will be required to complete assignments beyond those required of undergraduates. Students will write papers to present to class for discussion.
Staff.

697 Independent Research (1-15)
Prereq: perm. For students desiring to pursue independent research projects under supervision of a faculty member and resulting in term paper or equiv. Usually a sequel to previous subject-matter course.
Staff.

■ ANTHROPOLOGY

No graduate degree in anthropology is offered; however, some graduate courses are offered each quarter. These contribute particularly to degree programs in Asian studies, African studies, Latin American studies, and sociology, as well as other programs, such as communication, comparative arts, creative writing, dance, ecology, economics, education, film, food and nutrition, geography, linguistics, philosophy, and political science.

501 Anthropology and Film (5)
Prereq: 101 or perm. The use of film as a medium for recording cultural information; as a technique for observation, analysis, and interpretation of cultural information; and as a means for presenting information about cultures, human adaptation, human evolution, and anthropological research itself.

545 Gender in Cross-Cultural Perspective (5)
Prereq: 571 or perm. A cross-cultural, comparative inquiry into the way different non-Western cultures define femininity and masculinity. Taking the view that gender is a cultural construction, the course examines the relationships between gender ideas and such features of social systems as kinship and political hierarchy. Ethnographic fieldwork materials are explored in light of current gender theories.

550 Economic Anthropology (5)
Prereq: 571 and perm. Survey of economic arrangements found in various types of cultural systems with emphasis on application of anthropological theory and method for understanding particular systems.

551 Political Anthropology (5)
Prereq: 571 and perm. Cross-cultural survey of political arrangements with emphasis on application of anthropological method and theory to political problems.

552 Archaeological Anthropology (5)
Prereq: 571 and perm. Introduction to contemporary archaeology in which goals, theory, and method are directed toward reconstruction of extinct socio-cultural systems rather than toward time-space distribution of archaeological materials.

555 Medical Anthropology (5)
Prereq: 571. Non-Western medical systems and theories of health and disease causation; social basis for diagnosis and cure; curing rituals; symbolism of health and illness. Ecological factors in health and nonhealth; systematic connections between health or illness and both way of life and environmental situation.

556 Seminar in Methodology and Field Research (5)
Prereq: 571 or perm. A graduate seminar in anthropological field methods, designed to present the basic methodology literature and prepare students to conduct anthropological field research. Since anthropology has sub-fields (cultural anthropology, archaeology, physical anthropology), the methodological literature and techniques presented will vary by instructor's specialty. When taught by a cultural anthropologist, the focus will often be on ethnographic methods.

557 Anthropology of Religion (5)
Prereq: 571 and perm. Survey of various aspects of religion in their cultural setting with emphasis on the use of anthropological theories for an objective understanding of religion.

560 Kinship (5)
Prereq: 571. Theoretical framework and ethnographic work on kinship systems of various world cultures; non-Western family systems; kinship terminology; social change in kinship systems.

561 North American Prehistory (5)
Prereq: perm. Analysis and interpretation of the cultural evolution of indigenous North American Indian cultures. Emphasis on those cultures from Ohio and the Midwest.

565 Field School in Ohio Archaeology (5-10)
Prereq: perm. Actual archaeological investigation of prehistoric Indian sites in Ohio. Involves survey, excavation, and laboratory analysis of materials, as well as lectures on anthropological archaeology as it pertains to Ohio.

566 Cultures of the Americas (5)
Prereq: 571 and perm. Survey of cultural diversity present in South, North, or Meso-America with emphasis on application of anthropological method and theory to understanding of particular sociocultural systems.

568 Latin American Prehistory (5)
Reconstruction, analysis, and interpretation of the process of cultural evolution in pre-Hispanic Latin America.

571 Ethnology (5)
Prereq: perm. Cross-cultural analysis of structure, process, and adaptation in various cultural systems; includes kinship, ideology, economics, politics, and environmental relationships.

572 History of Anthropological Thought (5)
Prereq: 571 and perm. In-depth examination of schools of anthropology as they have developed within various subfields at different times and places.

575 Culture and Personality (5)
Prereq: 571 or perm. Interrelations between personality systems and cultural systems.

576 Culture Contact and Change (5)
Prereq: 571 and perm. Impacts of cultures upon one another; immediate and subsequent cultural adaptations. Emphasis on Southeast Asia, Latin America, Africa.

577 Peasant Communities (5)
Prereq: 571 and perm. Focuses upon folk component of state societies.

578 Human Ecology (5)
Prereq: 571 and perm. Analysis of mutual and reciprocal relations between socio-cultural systems and other systems in their environment; ecosystems and biotic communities in which human populations are included.

581 Cultures of Sub-Saharan Africa (5)
Prereq: 571 and perm. Survey of cultural diversity in sub-Saharan Africa with emphasis on application of anthropological theory and method to understanding of particular socio-cultural systems.

585 Cultures of Southeast Asia (5)
Prereq: 571 and perm. Survey of cultural systems of island and mainland Southeast Asia.

586 Problems in Southeast Asia Anthropology (5)
Prereq: 571 and perm. Selected topics of current theoretical concern relating to Southeast Asia.

587 Pacific Island Cultures (5)
Prereq: 571 and perm. Anthropological survey of Melanesia, Polynesia, and Micronesia.

591 Primate Social Organization (5)
Prereq: perm. Introduction to primate ethnology, with reference to development of human cultural behavior.

592 Human Evolution (5)
Prereq: perm. In-depth examination of evidence for biological macroevolution of humans. Topics include fossil record for hominoid and hominid forms, speciation, interpretation of fossil record, evolution of crucial anatomical areas, and fit between paleontological and immunological approaches to evolution.

594 Seminar in Anthropology (4-6)
Prereq: 571 and perm. Selected topics.

599 Readings in Anthropology (1-3, max 8)
Prereq: 571 or perm. Supervised readings in all areas of anthropology. Make individual arrangements with particular faculty member in advance.

■ ART

- Art Education
- Art History
- Ceramics

- **Painting**
- **Photography**
- **Printmaking**
- **Sculpture**
- **Inter-Area**

PROGRAMS OF STUDY

The School of Art offers programs of study leading to the Master of Fine Arts (M.F.A.) degree in ceramics, painting, photography, printmaking, sculpture, art history, or art history and art history/studio. The Master of Arts (M.A.) degree is offered in art education and photography.

• Art Education

The graduate program leading to the M.A. degree in art education requires the completion of at least 45 quarter hours of graduate coursework including 12 hours of art education, 12 hours of studio, and 8 to 12 hours of art history. Teacher certification is not required for entry into the program; however, an applicant must give evidence of ability to complete and benefit from the program.

• Art History

Upon entry to the Art History Program, a student is assigned an advisor, with whom the student is required to consult each quarter. By the end of the third quarter of the first year of study, and with the advice of faculty, a student must submit a proposal for a thesis paper. The program concludes with the successful completion of two three-hour examinations in two historical areas (chosen by the candidate with the advice of the faculty); the submission of a thesis paper (approved by the advisor) that demonstrates the student's scholarly abilities; and a final review by the art history faculty.

The graduate program leading to the M.F.A. degree in art history requires the completion of at least 90 quarter hours of graduate study, including at least 48 hours in art history course credits, 10 hours of studio art classes, and up to 15 hours in thesis credit hours. Directed electives are selected in consultation with faculty. Proof of reading competency in French, German, or another language approved by the faculty is required. Standard language examinations or the equivalent of one year's coursework without credit may be used. The language requirement should be completed by the end of the student's sixth quarter.

• Art History/Studio

To be recommended as a degree candidate, a student must submit both studio and art history work for review by faculty committees at the end of the second quarter. A year's residency is required after candidacy is attained. The program concludes with a thesis exhibition, final thesis review, a three hour art history comprehensive examination, and final art history review.

The graduate program leading to the M.F.A. degree in art history/studio requires the completion of at least 90 hours of graduate coursework including 36 hours in art history, 36 hours in a major studio area, 6 hours of seminar, and 5 hours of studio thesis.

• Ceramics, Painting, Printmaking, or Sculpture

The graduate program leading to the M.F.A. degree in a studio area requires the completion of at least 90 quarter hours of graduate coursework including 36 hours in a major studio area, area seminar, interdisciplinary seminar, 12 hours of art history, and five hours of studio thesis. To be recommended as a degree candidate, a student must submit work for review by a faculty committee at the end of the second quarter of study. A year's residency is required after candidacy is attained. The program concludes with a thesis exhibition and final thesis review.

• Photography, M.A.

The graduate program leading to the M.A. degree in applied photography requires the completion of at least 45 quarter hours of graduate coursework. Students will elect to concentrate in photographic communication (photojournalism, multi-media, and documentary) or photographic illustration (product, editorial, and architectural). Requirements for a concentration in photographic communication are 591A, Color Printing (five hours); a thesis project or presentation (five hours); 592A, B, and C; and electives. A portfolio review will be held at the end of the first quarter of study. Requirements for concentration in photographic illustration are 591A, color printing (five hours), a thesis project or presentation five hours); 593A, B, and C; and electives. A portfolio review will be held at the end of the first quarter of study.

• Photography, M.F.A.

The graduate program leading to the M.F.A. degree in photographic arts requires the completion of at least 90 quarter hours of graduate coursework including 591A, 591B, 594A, 10 hours of nonphotographic studio art, 690 (area seminar), 601 (interdisciplinary seminar), history of photography, art history, and a 10-hour thesis project. The remainder of the program consists of individualized study arranged by the student and an advisor. To be recommended as a degree candidate, a student must submit work for review by a faculty committee at the end of the second quarter of study. A year's residency is required after candidacy is attained. During the next-to-last quarter, a thesis project is to be done, leading to the required thesis exhibition to be presented during the final quarter.

GENERAL APPLICATION PROCEDURES (all programs)

An applicant must have a bachelor's degree from an accredited institution and a grade-point average of at least 2.5. Each applicant must submit completed application forms, fee, and two official transcripts from each post-secondary institution attended to the Office of Graduate Student Services, Ohio University, Athens OH 45701-2979. Each applicant also must submit three letters of recommendation to the Graduate Program Chair, School of Art, Ohio University, Athens OH 45701-2979. The final date for application is March 1. All application materials should be sent well in advance of due date; only complete applications will be considered.

DEGREE REQUIREMENTS

A normal, full-time academic load for a graduate student is 15 to 18 credit hours per quarter. Thesis hours must be taken the quarter in which the thesis will be presented.

SLIDE REQUIREMENTS

Applicants planning to concentrate in art education, art history and art history/studio, ceramics, painting, M.A. photography, printmaking, or sculpture must submit not more than 20 slides in a plastic, page-size sheet to the Graduate Program Chair, School of Art, Ohio University, Athens OH 45701-2979. Each slide is to be marked with the applicant's name, medium used, size, indication of top, and date executed. Slides are to be accompanied by a corresponding list which includes medium used, size, and date executed. Applicants are to include self-addressed, postage-paid envelopes for return of slides.

PHOTOGRAPHY PORTFOLIO REQUIREMENT

An applicant to the M.F.A. program in photography must submit a portfolio of no more than 15 prints (slides are acceptable) chosen to define the applicant's interests and capabilities to the Graduate Program Chair, School of Art, Ohio University, Athens OH 45701-2979. A letter indicating for which degree program application is being made and return postage are to be included. Portfolios will be returned after applications have been processed. (See preceding for M.A. slide requirement.)

ART HISTORY AND ART HISTORY/STUDIO WRITTEN PAPER REQUIREMENT

An applicant planning to concentrate in art history and art history/studio must submit a research paper, report, or some other specimen of formal writing demonstrating written language skills. Applicants for art history/studio must also indicate on the application form, line 10, the specific studio area in which they wish to concentrate (ceramics, painting, photography, printmaking, or sculpture).

FINANCIAL AID

The School of Art awards approximately 30 teaching associateships and 30 quarters of full-tuition scholarships each year. Selection is by competition and is based upon available openings and funding. If a student receives funding, he or she must maintain a 3.0 g.p.a. to retain support. Both beginning graduate students and continuing graduate students are eligible for graduate appointments. *Applicants wishing to be considered for associateships or scholarships are to mark items 4 and/or 5 in the section of the application form designated "Application for Graduate Appointment."*

Applicants who wish to apply for Perkins Loans (formerly National Direct Student Loans), Work Study, or any other form of financial aid are to write to the Director of Student Financial Aid and Scholarships, Chubb Hall, Ohio University, Athens OH 45701-2979 for further information and application forms. Applications must be submitted before March 1.

FURTHER INFORMATION

For further information, write to the Graduate Program Chair, School of Art, Ohio University, Athens OH 45701-2979

Art Education

560 Studies in Art Education (3)
Study of recent and current philosophical and curricular changes in art education.
Staff; F; Y.

561 Research in Art Education (3)
Prereq: 560. Study of the chief phases of historical development in art education at different chronological levels.
Staff; W; Y.

562 Research in Art Education (3)
Prereq: 561. Research methods appropriate to art education; planning individual research projects.
Staff; Sp; Y.

563 Proseminar in Art Education (3)
Development of individual research projects.
Staff; Sp; Y.

Art History

520 Greek Art (4)
Art of ancient Greece.
Schwindler; D.

521 Roman Art (4)
Art of ancient Rome.
Schwindler; W; Y.

522 Medieval Art (4)
Art of Europe from age of Constantine to art of Giotto.
Staff; W; Y.

523 Italian Renaissance Art (4)
Art of 15th-century Italy.
Bradshaw; F; Y.

524 Northern Renaissance Art (4)
Art of Northern Europe in 15th and 16th centuries.
Bradshaw; Sp; Y.

525 Art of High Renaissance and Mannerism (4)
Art of 16th-century Italy.
Bradshaw; D.

526 Baroque and Rococo Art (4)
Art of 17th- and 18th-century Europe.
Bradshaw; F; Y.

527 Art of 19th Century (4)
European art from French Revolution to 1900.
Staff; F; A.

528 Modern Art (4)
Specific movements and artists since 1900.
Staff; Sp; A.

529 The Arts of the United States (4)
Art in the U.S. from the Colonial period.
Schwindler; Sp; A.

530 The Arts of the Orient (4)
Art of India, China, Japan.
Schwindler; F; A.

531 Pre-Columbian Art (4)
Preconquest art of Mexico and Central and South America.
Perani; W; A.

532 West African Art (4)
The visual art traditions, including sculpture, ceramics, textiles, and architecture of the forest and savanna zones of West Africa.
Staff.

533 Central African Art (4)
The visual art traditions, including sculpture, ceramics, textiles, and architecture of the forest and savanna zones of Central Africa.
Staff.

534 Near Eastern Art (4)
Art of Egypt, Mesopotamia, Assyria, and Babylonia.
Staff; Sp; A.

537 History of Photography (4)
History and development of photography as art, science, and industry. Leading photographers and their contributions to development of the art.
Staff; F; Y.

540 Selected Topics in Art History (4)
Selected problems in the visual arts, such as interdisciplinary topics, cross-cultural studies, thematic treatments, technical investigations, and approaches to material. Content may vary with each offering of this course.
Staff.

550 Seminar in Art History (3)
Intensive study of projects of limited scope.
Staff; D.

560 Art Historiography (4)
Staff; Sp.

700 Art History Thesis (1-15)
Staff; F, W, Sp, Su; Y.

780 Individual Problems (1-6)
Staff; F, W, Sp, Su; Y.

781 Individual Reading (1-3)
Staff; F, W, Sp, Su; Y.

Ceramics

515 Ceramics (3-6)
Development of skills and exploration of processes leading toward personal expression.
Staff; F, W, Sp, Su; Y.

516 Ceramics (3-6)
Prereq: 515.
Staff; F, W, Sp, Su; Y.

610 Ceramics Seminar (3)
Lectures, discussions, field trips, slide and film presentations dealing with contemporary issues in ceramic art.
Staff; F; Y.

615 Ceramics (3-6)
Development of concepts leading toward studio thesis.
Staff; F, W, Sp, Su; Y.

616 Ceramics (3-6)
Prereq: 615.
Staff; F, W, Sp, Su; Y.

715 Ceramics (3-6)
Prereq: 616.
Staff; F, W, Sp, Su; Y.

716 Ceramics (3-6)
Prereq: 715.
Staff; F, W, Sp, Su; Y.

718 Ceramics Written Thesis (2-6)
Staff; F, W, Sp, Su; Y.

719 Ceramics Studio Thesis (5-10)
Staff; F, W, Sp, Su; Y.

Painting

505 Painting (3-6)
Staff; F, W, Sp, Su; Y.

506 Painting (3-6)
Prereq: 505.
Staff; F, W, Sp, Su, Y.

600 Painting Seminar (3)
Discussions, readings, presentations, and papers related to developments in recent painting.
Staff; F; Y.

605 Painting (3-6)
Prereq: 506.
Staff; F, W, Sp, Su; Y.

606 Painting (3-6)
Prereq: 605.
Staff; F, W, Sp, Su; Y.

705 Painting (3-6)
Prereq: 606.
Staff; F, W, Sp, Su; Y.

706 Painting (3-6)
Prereq: 705.
Staff; F, W, Sp, Su; Y.

708 Painting Written Thesis (2-6)
Staff: F, W, Sp, Su; Y.

709 Painting Studio Thesis (5-10)
Staff: F, W, Sp, Su; Y.

Photography

591A Photographic Processes (5)
Intensive study of black and white materials and their creative uses. 2 lec, 6 lab.
Williams; F; Y.

591B Photographic Processes (5)
Continuation of 591A, emphasis on quality control in printing.
Williams; W.

591C Photographic Processes (5)
Continuation of 591A and 591B.
Staff; Sp; Y.

592A Multiple Images (5)
Camera reporting and picture story essays; experimental work with multiple images for desired single or accumulative effect in newspaper print media.
Eiler; F; Y.

592B Multiple Images (5)
Camera reporting and picture story essays; documentary layouts; experimental work with multiple images for any desired single or accumulative effect in magazine and book print media.
Eiler; W; Y.

592C Multiple Images (5)
Camera reporting and picture essays, documentary work in narrative multiple images for any desired single or accumulative effect in color projected slide shows.
Eiler; Sp; Y.

593A Combined Applications (5)
Fundamentals of studio and location photography with emphasis in glamour portraiture, body movement, and fashion.
Eiler; Sp; Y.

593B Combined Applications (5)
Fundamentals of advertising and studio commercial work. 2 lec, 6 lab.
Eiler; W; Y.

593C Combined Applications (5)
Fundamentals of architectural and editorial industrial illustration.
Eiler; Sp; Y.

594A Color Materials and Methods (5)
Theory of color; practice with transparency materials; slide show/multi-media presentations. 1 lec, 8 lab.
Williams; F, W, S; Y.

594B Color Materials and Methods (5)
Continuation of 594A; color negatives, direct separations, separations from transparencies, masking, and color printing methods.
Williams; F, W, Sp; Y.

594C Color Materials and Methods (5)
Continuation of 594A and 594B; advanced color printing.
Staff; Sp; Y.

690 Photographic Seminar (3)
Contemporary trends and concepts of photographic art as basis for individual studies.
Staff; F; Y.

691A Graduate Study in Photographic Arts (5-10)
Individual practice under instructor's supervision. Max of 10 hrs allowed from 691 series.
Staff; F; Y.

691B Graduate Study in Photographic Arts (5-10)
Continuation of 691A. Max of 10 hrs allowed from 691 series.
Staff; W; Y.

691C Graduate Study in Photographic Arts (5-10)
Continuation of 691A and 691B. Max of 10 hrs allowed from 691 series.
Staff; Sp; Y.

791A Advanced Study in Photographic Arts (5-10)
Prereq: 10 hrs in 691 series. Individual practice under instructor's supervision. Max of 15 hrs allowed from 791 series.
Staff; F; Y.

791B Advanced Study in Photographic Arts (5-10)
Prereq: 10 hrs in 691 series. Continuation of 791A. Max of 15 hrs allowed from 791 series.
Staff; W; Y.

791C Advanced Study in Photographic Arts (5-10)
Prereq: 10 hrs in 691 series. Continuation of 791A and 791B. Max of 15 hrs allowed from 791 series.
Staff; Sp; Y.

798 Photography Written Thesis (6)
Staff; F, W, Sp, Su; Y.

799 Photography Studio Thesis (5-10)
Staff; F, W, Sp, Su; Y.

Printmaking

541 Printmaking (3-6)
Staff; F, W, Sp, Su; Y.

542 Printmaking (3-6)
Prereq: 541.
Staff; F, W, Sp, Su; Y.

640 Printmaking Seminar (3)
Discussions, readings, presentations, and papers on topics of specific interest and concern to printmakers.
Staff; F; Y.

641 Printmaking (3-6)
Prereq: 542.
Staff; F, W, Sp, Su; Y.

642 Printmaking (3-6)
Prereq: 641.
Staff; F, W, Sp, Su; Y.

741 Printmaking (3-6)
Prereq: 642.
Staff; F, W, Sp, Su; Y.

742 Printmaking (3-6)
Prereq: 741.
Staff; F, W, Sp, Su; Y.

748 Printmaking Written Thesis (2-6)
Staff; F, W, Sp, Su; Y.

749 Printmaking Studio Thesis (5-10)
Staff; F, W, Sp, Su; Y.

Sculpture

531 Sculpture (3-6)
Staff; F, W, Sp, Su; Y.

532 Sculpture (3-6)
Prereq: 531.
Staff; F, W, Sp, Su; Y.

630 Sculpture Seminar (3)
Projects, research, and discussion of topics of specific interest and concern to sculptors.
Staff; F; Y.

631 Sculpture (3-6)
Prereq: 532.
Staff; F, W, Sp, Su; Y.

632 Sculpture (3-6)
Prereq: 631.
Staff; F, W, Sp, Su; Y.

731 Sculpture (3-6)
Prereq: 632.
Staff; F, W, Sp, Su; Y.

732 Sculpture (3-6)
Prereq: 731.
Staff; F, W, Sp, Su; Y.

738 Sculpture Written Thesis (2-6)
Staff; F, W, Sp, Su; Y.

739 Sculpture Studio Thesis (5-10)
Staff; F, W, Sp, Su; Y.

Inter-Area

601 Interdisciplinary Seminar (3)
Readings, discussions, and presentations exploring relationship between various visual arts disciplines.
Staff; W; Y.

780 Individual Problems (1-6)
Staff; F, W, Sp, Su; Y.

781 Individual Reading (1-3)
Staff; F, W, Sp, Su; Y.

AUDIOLOGY

(See Hearing and Speech Sciences)

BACTERIOLOGY

(See Biological Sciences)

BIOLOGY

(See Biological Sciences or Environmental and Plant Biology)

BLACK STUDIES

(See Afro-American Studies)

BIOLOGICAL SCIENCES

Admission to graduate study in biological sciences requires a bachelor's degree with a strong background in the biological and physical sciences, including calculus, organic chemistry, and physics. Results of verbal and quantitative tests of the Graduate Record Examination are required of all applicants. The GRE advanced subject test in biology or a physical science is recommended, but not required. These scores, along with the application, transcripts, and three letters of recommendation, should be received by March 1 for prospective students to be considered for financial support during the following academic year, although applications are accepted at any time. Applicants whose native language is not English also must submit the results of the Test of English as a Foreign Language (TOEFL), or its equivalent.

Master's students must complete 45 quarter hours, with at least 30 hours being in formal courses and seminars. A nonthesis master's program is available for secondary school and junior college teachers. Doctoral students should complete 135 quarter hours (beyond the bachelor's degree), with at least 45 quarter hours in formal courses and seminars. At least one quarter of supervised teaching within the department is required of all master's students, and two quarters are required of doctoral students.

AREAS OF EMPHASIS

Areas of emphasis within the department include aquatic biology, entomology, ecology, animal behavior, evolutionary biology, microbiology, immunology, cell and developmental biology, ultrastructure, functional morphology, physiology, and pharmacology.

The Department of Biological Sciences also offers interdisciplinary studies in the following areas:

Conservation Biology—is a plan of study, leading to the M.S. and Ph.D. degrees, offered in conjunction with the departments of Environmental and Plant Biology, Geography, and Geological Sciences. Its primary efforts are in furthering education and research in biodiversity. Further information is available through the department.

Molecular and Cellular Biology—a Ph.D. program offered in conjunction with the departments of Chemistry and Environmental and Plant Biology. See listing under Molecular and Cellular Biology for further information.

Neurobiology—is a plan of study, leading to the M.S. and Ph.D. degrees, offered in conjunction with the Department of Psychology. It prepares students for research and teaching careers in neuroscience. Applicants must have a bachelor's or master's degree in biological sciences, physical science, psychology, engineering, or mathematics. Areas of research include computational neurobiology, developmental neurobiology and, neural crest cell differentiation, control of movement, central pattern generation, muscle biology, musculoskeletal mechanics, visual, auditory, and vestibular neurobiology, cardiovascular regulation, psychobiology of stress, and brain behavior relations. Further information is available through the department.

Biological Sciences

503 Comparative Vertebrate Anatomy (6)
Prereq: perm. Comparative study of body systems of vertebrates with lab work covering various vertebrate forms. 5 lec, 4 lab.
Reilly; W; Y.

506 Vertebrate Embryology (6)
Prereq: 300 or 303, perm. Development from gametogenesis to organogenesis in representative vertebrate types with lab emphasis given to chick and pig. 4 lec, 4 lab.
Ross; W, Sp; Y.

507 Developmental Biology (4)
Prereq: perm. Mechanisms of animal development at tissue, cellular, and molecular levels of organization, with emphasis on experimental approaches. 4 lec.
Luckenbill; Sp; D.

508 Histology (6)
Prereq: 303, perm. Cells, tissues, and organ systems with regard to their morphological and physiological properties. 4 lec, 4 lab.
Palmer; W; Y.

509 Neurobiology I (4)
Prereq: 448 or perm. Intro to neurobiology, beginning with in-depth consideration of anatomy and physiology of neurons, using these concepts to develop an understanding of vertebrate sensory systems: vision, audition, somasthesia, lateral line sense, chemical senses, infra-red and magnetic field detection, electroreception. Emphasizes physical and ecological factors that influence design of sensory systems.
Peterson, Rowe; F; A.

510 Neurobiology II (4)
Prereq: 509 or perm. Builds on 509 to develop understanding of movement control and sensory-motor integration with molecular to behavioral levels. Learning, emotion, social behavior. 4 lec.
Peterson, Rowe; W; A.

511 Methods in Computational Neuroscience (4)
Prereq: recommended: BIOS 509, MATH 340, and CS 220 or perm. Lecture, discussion, and computer lab. Introduction to mathematical and computational techniques for modeling single neurons and networks of neurons. Cable theory; Rall's model; compartmental models; introduction to available software for simulating neurons and networks of neurons; modeling of action potentials, Hodkin-Huxley equations, synaptic conductances, and voltage-dependent conductances; Hebbian synapses; synaptic modification rules; quantal analysis; neural networks. Students expected to complete simulation project using one of the available software packages. 4 lec, lab arr.
Holmes; W; Y.

520 Animal Locomotion (4)
Prereq: 303 or perm. Describes basic mechanical, behavioral, and ecological aspects of animal locomotion. Some background in anatomy and basic physics (vectors, levers) is recommended.
Staff; W; A.

525 Evolutionary Genetics (4)
Prereq: perm. Basic concepts of population genetics (mutation, gene flow, natural selection, genetic drift). Rates, patterns, and processes of molecular evolution at the population and species level. 4 lec.
White; F; D.

529 Marine Biology (5)
Prereq: perm. Biological processes in marine and estuarine habitats, and adaptations for life at sea; emphasis on environmental variables affecting distribution, abundance, and dynamics of marine plants and animals. Includes 5-day field trip to temperate marine environment late in qtr; estimated cost $80 per student; limited to 20 students. 5 lec, field trip.
Hummon; Sp; Y.

530 Invertebrate Biology (6)
Prereq: perm. Structure, function, systematic, and ecological relationships among full range of phyla. 4 lec, 4 lab. Project or paper required.
Hummon; Sp; A.

531 Limnology (5)
Prereq: perm. Physical, chemical, and biological processes in lakes (analogous to those of oceanography), with emphasis on the analysis of data; distribution, abundance, and dynamics of plant and animal populations, structure, organization, and productivity of communities; lab covers both standing and running freshwater habitats, with emphasis on acid mine pollution. 4 lec, 3 lab.
Hummon; Sp; A.

534 Biology of Spiders (5)
Prereq: perm. Morphology, physiology, behavior, ecology, and classification of spiders. Lab emphasizes taxonomic studies. 3 lec, 4 lab.
Rovner; W; Y.

535 Entomology (6)
Prereq: perm. Overview of insect biology. Lecture: insect morphology, physiology, behavior, systematics, evolution, and ecology. Lab: emphasis on insect collection and identification. 4 lec, 4 lab.
Romoser; Sp; Y.

541 Parasitology (6)
Prereq: perm. Etiology of human parasites, their transmission, diagnosis, and prevention. 3 lec, 6 lab.
Heck; Sp; Y.

542 Principles of Physiology I (3)
Function of animal cells and organs emphasizing the physical and chemical principles underlying physiological processes. Focus on membrane properties of excitable and non-excitable cells, chemical messengers and regulators, fluid balance, and nutrient balance. 3 lec.
Chamberlin, Howell; W; Y.

543 Principles of Physiology II (3)
Physiological processes underlying locomotion, sensation, behavior, circulation, gas exchange, and temperature relations. 3 lec.
Chamberlin, Howell; Sp; Y.

545 Physiology of Exercise (4)
Prereq: perm. Fundamental concepts and application of organ systems' responses to exercise: special reference to skeletal muscle metabolism, energy expenditure, cardiorespiratory regulation, and training and environmental adaptations. 4 lec. (Same as HPES 514).
Hagerman; F; Y.

546 Physiology of Exercise Laboratory (3)
Prereq: perm; required for those enrolled in 545. Lab experiences designed to complement 545. 6 lab.
Gilders, Murray; F; Y.

548 Cell Physiology (4)
Prereq: physics, organic chemistry. Physical and chemical processes common to many cells.
Howell; F; Y.

549 Cell Physiology Laboratory (3)
Prereq: 548 or perm. Lab experiments designed to illustrate experimental bases of principles of cell chemistry and physiology. 6 lab.
Wilson; Sp; D.

550 Principles of Endocrinology (4)
Prereq: 560 or 548 recommended. Endocrine control of mammalian homeostasis and metabolism. 4 lec.
Loucks, Pontanova; W.

552 Reproductive Physiology (3)
Prereq: 550 recommended, perm. Reproductive physiology, development, maturation, reproductive cycles, gametogenesis, fertilization, implantation, pregnancy, lactation, and environment and behavior. Emphasis on mammals.
Murray; Sp; A.

557 Animal Systematics (4)
Prereq: perm. Principles and methods of systematic zoology. Numerical methods and hypotheticodeductive reasoning applied to study of organismic diversity (taxonomy) and geographic distribution (biogeography). Use of computer stressed. 3 lec, 2 hr disc., and computer work.
Moody; F; A.

560 Animal Physiology (4)
Prereq: perm. Principles of animal physiology with emphasis on comparative, regulatory, and adaptive aspects of neuromuscular and neuroendocrine regulation, circulation, excretion, and osmotic and temperature regulatory mechanisms. 4 lec.
Wilson; Sp; Y.

561 Animal Physiology Lab (3)
Prereq: 560 or perm. Lab exercises designed to illustrate experimental basis of principles covered in 560. 6 lab.
Wilson; Sp; Y.

563 Cell Chemistry (4)
Prereq: perm. Chemistry of carbohydrates, lipids, proteins, and nucleic acids. Principles of enzyme activity and kinetics; metabolic pathways and regulations. 4 lec.
Wilson, Wince; F; Y.

566 Neurophysiology (4)
Prereq: perm. Basic aspects of cellular neurobiology; overall introduction to neurophysiology using an evolutionary approach to study excitable cells, from simple to complex nervous systems. Four lectures and student seminars.
Costello; W; D.

567 Neurophysiology Laboratory (2)
Prereq: 566 or with 566; perm. Lab sessions using advanced techniques in neurophysiology to illustrate lecture topics in 566. Training in manufacture and use of intra- and extra-cellular electrodes. 4 lab.
Costello; W; D.

568 Ichthyology (4)
Prereq: perm. Lecture course emphasizing aspects of biology of major families of freshwater and marine fishes. Topics include morphology, physiology, taxonomy, evolution, ecology, behavior, and zoogeography.
Eastman; Sp; A.

571 Ornithology (5)
Prereq: perm. Bird biology, including discussions on anatomy, behavior, adaptations, life histories, and role of ornithology in current ecological and evolutionary theory. Research paper required. 4 lec, 3 lab, and field.
Miles; F; Y.

572 Herpetology (5)
Prereq: perm. Biology of amphibians and reptiles. Lectures emphasize anatomy, physiology, ecology, behavior, taxonomy, and geography. Labs and field trips emphasize species of Ohio and families of U.S.A. 3 lec, 4 lab, and field.
Moody; Sp; Y.

573 Animal Behavior (5)
Prereq: perm. Ecological, physiological, and developmental aspects of animal behavior, interpreted from the perspective of evolutionary biology. 5 lec.
Rovner; W; Y.

574 Mammalogy (6)
Prereq: perm. Mammals; their origin, evolution and adaptations, geographical distribution, ecology and systematics. Emphasis on local fauna. Field project required. 4 lec, 4 lab, and field.
Svendsen; F; Y.

575 Sociobiology (3)
Prereq: perm. Current understanding of how and why animal social behavior evolved, including spacing, mating, and parental behavior of solitary as well as social animals. Research paper required. Lectures, reading, and reports. 3 lec.
Svendsen; Sp; A.

576 Evolution and the Challenge of Creationism (4)
Prereq: perm. Examination of two ways of knowing—science and religion—as exemplified in controversy on evolution and creationism. Claims and evidence for evolution and special creation, issues and strategies of conflict, arenas of confrontation, and implications of outcomes for both science and theology discussed. 4 lec/disc.
Hummon; F; Y.

577 Population Ecology (4)
Prereq: perm. Major theories and concepts in populations and evolutionary ecology. Emphasis on theoretical, field, and experimental studies pertaining to growth and regulation of populations; population interactions, including predation and competition, distribution and abundance, and life history theories. 4 lec.
Miles; W; D.

578 Community Ecology (4)
Prereq: 577 or equiv, perm. Provides a theoretical and empirical examination of the description, structure, and organization of communities. Emphasis on mathematical models that describe the biotic processes that mold community structure. Further consideration of null models in ecology and historical effects. 4 lec.
Miles; W; A.

579 Evolution (4)
Prereq: 325. Current concepts of evolutionary processes; sources of variation, agents of change, natural selection and adaptation, speciation, and macroevolution. 4 lec.
Svendsen; W; Y.

580 Biological Research Methods (2-4)
Prereq: perm.
Graduate faculty; F, W, Sp; Y.

587 Physiological Laboratory Apprenticeship (6, max 12)
Prereq: perm. Provides in-depth introduction to contemporary lab techniques, lab operation, and research methodology in selected areas of physiology and pharmacology. Lab apprenticeships form 2-qtr sequence which requires enrollment for 6 credits each qtr.
Staff; W, Sp; Y.

653 Current Topics in Biological Transport (3)
Prereq: perm. Advanced lecture-seminar: critical study of literature, and research methods pertaining to physiology of biological transport.
Staff; F; A.

654 Physiology of Work and Fatigue (3)
Prereq: perm. Seminar using current literature as basis for detailed discussion of contemporary facts and theories concerning influence of acute and chronic exercise upon physiological processes in mammals. Major areas include skeletal muscle, cardiovascular, endocrine, neuromuscular, and respiratory physiology.
Staff; W; A.

655 Cardiovascular Physiology (3)
Prereq: perm. Advanced lecture-seminar course for grad students. Hemodynamics, normal physiology of heart and vascular system, and control of cardiovascular function. 3 lec.
Henley; W; A.

670 Biostatistics I (5)
Prereq: perm. Application of univariate statistics to biology; descriptive statistics, distributions, hypothesis testing, analysis of variance, linear regression, correlation, and analysis of frequencies. 4 lec and arr.
Svendsen; W; Y.

680B Techniques in Electron Microscopy (6)
Prereq: perm. Principles and methods for preparation of biological specimens for ultrastructural analysis and research, and some associated techniques. Instruction in microscope operation and maintenance and darkroom techniques. Arr. Lab project and paper required.
Hikida; W; Y.

682 Advanced Topics (1-3)
Prereq: perm. Specialized topics not otherwise available to advanced students.
Graduate faculty; F, W, Sp; Y.

683 Colloquium in Ecology, Behavior, and Evolution (1)
Prereq: perm. Forum for presentation of original research, literature reviews, and discussions of contemporary issues in ecology, behavior, and evolution. Annual participation is required of all graduate students enrolled in the section of Ecology, Behavior, and Evolution. Presentation and discussion.
Staff; W, Sp; Y.

685 Research in Zoology (1-15)
Prereq: perm. Unspecified research, not directly applicable to thesis.
Graduate faculty; F, W, Sp, Su; Y.

695 Master's Thesis (1-15)
Prereq: perm. Research directly applicable to thesis.
Graduate faculty; F, W, Sp, Su; Y.

709 Biological Ultrastructure (3)
Prereq: perm. Investigation of cells, organelles, and some organ systems, correlating data on their ultrastructure, chemistry, and function. 3 lec.
Hikida; D.

730A Insect Biology (1-2, max 6)
Prereq: perm. Advanced topics in entomology.
Romoser; D; Y.

750A Muscle Biology (1-5)
Prereq: perm. Topics in muscle structure, function, development, disease, and relationship with nervous system. Different aspects of muscle biology covered each term, and topics chosen on basis of need or requests of interested students.
Hikida; F; Y; D.

750C Neurobiology Seminar (1-4)
Prereq: perm. Current research topics in neurobiology of vertebrates and invertebrates with emphasis on cellular and molecular mechanisms. Faculty and student discussion.
Costello, Luckenbill; W-Y; Sp-A.

770B Theoretical Ecology (14)
Prereq: perm. Examination of ecological problems from theoretical and mathematical standpoint.
Hummon, Svendsen; W; D.

770F Aquatic Ecosystems (1-2, max 6)
Prereq: perm. Critical study of literature and research methods pertaining to nonpolluted and polluted ecosystems. Arr.
Hummon; W; D.

770G Ecology of Benthic Micrometazoa (1-2, max 6)
Prereq: perm. Critical study of literature and research methods pertaining to meiofauna (interstitial fauna, psammon) of aquatic and soil ecosystems. Arr.
Hummon; W; D.

780 Neurophysiological Techniques (6)
Prereq: perm. Intensive examination of electrophysiological techniques employed in neurophysiological research. Emphasis on microelectrode recording methods.
DiCaprio; Sp; D.

870 Biostatistics II (5)
Prereq: perm. Application of multivariate statistics to biology; multiple regression and correlation, principal components, canonical correlation, discriminant function, and factor analysis. Project in experimental design and analysis of data. 4 lec and arr.
Miles; F; A.

880B Techniques in Electron Microscopy (6)
Prereq: perm. Principles and methods for preparation of biological specimens for ultrastructural analysis and research, and some associated techniques. Instruction in microscope operation and maintenance and darkroom techniques. Lab project and paper required.
Hikida; W; Y.

895 Doctoral Dissertation (1-15)
Prereq: perm. Research directed toward doctoral degree.
Graduate faculty; F, W, Sp, Su; Y.

Microbiology

511 General Microbiology (6)
Prereq: perm. Properties of microorganisms and their importance in our environment. Lab training in common microbiological methods. 3 lec, 6 lab. Not for microbiology majors.
Downey, James, Maier; F, W, Sp; A.

512 Microbiological Techniques (4)
Prereq: 511, perm. Semi-independent course gives extensive experience in use of bacteriological techniques and equipment; information retrieval. 2 lec, 8 lab. Not for microbiology majors.
Maier; W; Y.

513 Pathogenic Bacteriology (6)
Prereq: 511, or 611. Microorganisms in relation to disease. Disease manifestations, diagnostic and control methods; some aspects of immunity. 3 lec, 6 lab.
Modrzakowski; Sp; A.

515 Immunology (6)
Prereq: 511. Fundamental principles and concepts of immunity and the immune response. 4 lec, 4 and arr lab.
Powell; W; Y.

516 Immunochemistry (6)
Prereq: 515. In-depth study of the molecules involved in the immune response with emphasis on antibody/antigen interactions and immunochemical techniques. 3 lec, 6 and arr lab.
Powell; Sp; Y.

517 Cellular Immunology (4)
Course addresses cells and tissues of the immune system, maturation of lymphocytes, immunogenetics and gene expression, antigen presentation, T-cell recognition and activation, effector cells, hypersensitivity, microbial immunity, tumor and transplantation immunology and autoimmunity. 4 lec.
Powell; Sp; Y.

518 Epidemiology (4)
Prereq: perm. Model of spread, cure, and prevention of communicable diseases in humans. 4 lec.
Romoser; F; Y.

525 Microbial Genetics (3)
Prereq: perm. For students majoring in microbiology, molecular biology, or applied biotechnology. In-depth study of the genetics of selected procaryotes and their viruses. Topics include genetic elements of bacteria, mutations and mutagenesis, lysogeny, and phage conversion, mechanisms of gene transfer and recombinations, regulation of gene expression and recombinant DNA.
Jollick; W; A.

541 Parasitology (6)
Prereq: perm. Etiology of human parasites, their transmission, diagnosis, and prevention. 3 lec, 6 lab.
Heck; Sp; Y.

611A Advanced Microbiology (4)
Prereq: perm. Intensive treatment of bacteria, viruses, and eucaryotic protists.
Staff; F; Y.

611B Advanced Microbiology (3)
Prereq: 611A, perm. Continuation of 611A. 3 lec.
Staff; W; Y.

613 Advanced Pathogenic Microbiology (3)
Prereq: perm. Mechanisms by which microorganisms cause disease. Biochemical determinants of virulence factors. Selected topics on antagonism of host defense mechanisms. 3 lec.
Modrzakowski: W; Y.

614 Animal Virology (4)
Prereq: perm. Covers molecular and medical aspects of animal virology. Emphasis on various mechanisms of virus replication and oncogenic transformation. Viral diseases, pathogenic mechanisms, interferon, and antiviral drugs also covered. Lab includes exercises in propagation of tissue culture and animal viruses. 3 lec.
Staff: F; Y.

615 Advanced Immunology (4)
Prereq: perm. Advanced level instruction on genetic and molecular mechanisms controlling humoral and cellular immune responses. Current research topics and immunological research techniques will be overviewed via readings of research periodicals. 3 lec.
Goodrum: F; Y.

619 Microbial Physiology (4)
Prereq: 611, CHEM 590, 591. Intensive treatment of structure and function in representative microorganisms. Emphasis on energetics, transport, biosynthesis, regulatory systems, and cell behavior including chemotaxis and thermophily. 2 lec.
Downey: Sp; Y.

640 Research Techniques in Microbiology I (6)
Prereq: perm. Basic theory and applications of specific research procedures used in microbiology. Special techniques are introduced for the study of microbial cells and their components. Concentration on microbial cell systems, tissue culture, and monoclonal antibody techniques. 3 lec, 6 lab.
Staff: F; Y.

641 Research Techniques in Microbiology II (6)
Prereq: 640. Advanced analytical techniques introduced for application of research procedures in microbiology. Theory and practice of gas-liquid chromatography, density gradient centrifugation, gel electrophoresis, autoradiography, radioisotope tracer techniques, and special immunological procedures. 3 lec, 6 lab.
Staff: W; Y.

682 Advanced Topics (1-3)
Prereq: perm. Specialized topics not otherwise available to advanced students.
Graduate faculty: F, W, Sp; Y.

685 Research in Microbiology (1-15)
Prereq: perm. Unspecified research, not directly applicable to thesis.
Graduate faculty: F, W, Sp, Su; Y.

695 Master's Thesis (1-15)
Prereq: perm. Research directly applicable to thesis.
Graduate faculty: F, W, Sp, Su; Y.

895 Doctoral Dissertation (1-15)
Prereq: perm. Research directed toward doctoral degree.
Graduate faculty: F, W, Sp, Su; Y.

■ BUSINESS ADMINISTRATION

- Accounting
- Business Administration
- Business Law
- Finance
- Human Resource Management
- Management
- Management Information Systems
- Marketing
- Operations
- Quantitative Business Analysis

MASTER OF BUSINESS ADMINISTRATION

Information on the full-time and part-time M.B.A. programs are found below; for further details, please contact the Director of Graduate Programs, Haning Hall, Ohio University, Athens, Ohio 45701-2979. Phone: 614-593-2007.

Information on the Executive M.B.A .program is found below; for further details, please contact Dr. Kahandas Nandola, Director, E.M.B.A., Haning Hall, Ohio University, Athens, Ohio 45701-2979. Phone: 614-593-2028.

M.B.A. DEGREE (FULL-TIME)

The M.B.A. degree program is considered an integral part of the individual's career development. It provides a comprehensive and integrated set of activities designed to foster the student's personal and professional growth. Close interaction with the faculty, an integrated electronic network environment, contact with executives, a mentor program, a joint student study project abroad—all contribute to the student's development.

The M.B.A. is a generalist degree, and the program stresses producing a competent ethics-oriented general manager with the appropriate skills and expertise to manage in a competitive global environment.

The full-time M.B.A. program is a lock-step, 13-month program that begins in mid-August and ends in mid-September. The full-time program is limited to 40 students. A total of 72 credit hours of instruction is delivered over the 13 months. The program will be in session the entire 13 months except for the holiday period between Christmas and New Year's. Candidates sign up for 18 credit hours for each of four quarters: fall, winter, spring, and summer. The primary delivery of course content is in modular form. (An example of a typical academic year using modules of instruction follows at the end of this section.)

The central learning core of the program is a series of 15-30 business problems. Students approach and solve the problems, sometimes in task forces, sometimes individually. As students are approaching the problem, they are presented with course content in modules, with each module presented at a time when it will be useful to the students for solving the current learning problem.

This methodology helps students learn content in the context in which they will apply it in the future, maximizes retention of knowledge, and helps students develop the ability to apply their knowledge. It also encourages what business has indicated to be important personal characteristics: reliability, personal responsibility, time management, initiative, adaptability, and the willingness to take risks. Further, because of the learning environment, students learn to work using the latest in information technology, and they learn how to work together collaboratively, managing ill-structured problems, with a minimum of direction.

We expect the following outcomes of students in the program:
- The ability to apply knowledge to business situations using such disciplines as management, marketing, accounting, operations, MIS, and finance to name a few.
- Ability to analyze a business situation and communicate ideas in an effective and succinct manner.
- Evidence of behavioral skills such as working effectively with individuals and groups, use of power, managing change in the work unit, and stimulating achievement in others.
- Ability to accept personal responsibility for direction of learning and career.
- Evidence of understanding the business world, its nature, function, and place in society.
- Ability to think strategically about organizations in their external and internal environments.
- Evidence of critical thinking through the understanding of technology, culture, and social values and their interrelationships with the organization.

Each academic year, a team of core instructors identifies the modules they will offer from the listing of 600-level business courses: Accounting, Business Administration, Business Law, Finance, Human Resource Management, Management, Management Information Systems, Marketing, Operations, and Quantitative Business Analysis. A typical 13-month program will consist of four cores:

Fall Quarter: MBA 601	CORE I (18)
Winter Quarter: MBA 602	CORE II (18)
Spring Quarter: MBA 603	CORE III (18)
Summer Quarter: MBA 604	CORE IV (18)

ADMISSION

Prerequisites to entry to the full-time program are a minimum of one course each in accounting, microeconomics, statistics, and critical thinking. Applicants must have transcript documentation indicating successful completion of such courses at either the undergraduate or graduate level of study with a grade of B or better. In addition, there needs to be evidence of computer proficiency in word processing and spreadsheets.

Ability in critical thinking may be exhibited by courses in logic, English rhetoric, cognitive methods, integrated case courses, literary analysis, or econometrics, to name a few. Applicants should submit a catalog course description when possible. If documentation is unavailable or inconclusive, evidence of critical thinking may be requested and evaluated through an essay required as part of the applicant's admissions material.

Admission is competitive. Factors considered include undergraduate grade-point average, scores on the Graduate Management Admissions Test (GMAT), work experience, personal essay, interview, and recommendations. International applicants also must include their score on the Test of English as a Foreign Language (TOEFL). Successful applicants typically have at least a 3.0 undergraduate cumulative average (on a 4.0 scale) and a score of 500 or better on the GMAT. In addition, international applicants typically have a TOEFL score of 600 or better.

All applicants for admission must submit two official transcripts of undergraduate work and three letters of recommendation. In addition, applicants must have GMAT scores submitted by the Educational Testing Service (ETS), Box 966, Princeton, New Jersey, 08540. Applicants whose native language is not English must also have ETS submit their TOEFL scores.

The deadline for application is April 1.

FINANCIAL AID

The College of Business Administration has a number of graduate associateships and tuition scholarships available for students who demonstrate outstanding potential. Graduate associateships provide stipends of about $6,900. The student must pay only the general fee. The graduate associate is required to work approximately 15 hours weekly.

Requests for the above financial aid should be noted on the application form. All awards for financial aid are generally announced in May.

In general, tuition scholarships and graduate associateships are not awarded to international students.

M.B.A. DEGREE (PART-TIME AT LANCASTER)

Recognizing the need to provide graduate education for individuals engaged in full-time employment, the College of Business Administration offers a part-time M.B.A. program at Ohio University's campus in Lancaster, Ohio. It periodically offers one-time, one-cycle programs at other selected locations in southeastern Ohio. Check with the Director of Graduate Programs to ascertain if any such programs are currently being undertaken.

The part-time M.B.A. program is designed for individuals who have either business or nonbusiness undergraduate degrees. The program, carried out typically in the evening and on weekends at Lancaster, Ohio, is divided into two phases. Phase I courses build a strong foundation in business concepts. Phase II courses cover advanced concepts in strategic planning, accounting, finance, marketing, production, and human resource management.

The evening M.B.A. program was designed with efficiency in scheduling in mind. Courses are scheduled year-round so that a student can earn an M.B.A in a reasonable period of time. Once Phase I is completed or waived, a student may expect to complete Phase II within two-years.

Phase I courses are not offered in a fixed sequence. Instead, courses can be completed on a schedule which best fits the student's needs. Upon completion of Phase I courses, the student may enroll in Phase II courses.

Phase II courses are offered in a fixed sequence. Depending on the schedule, a student may complete one or two courses each quarter. Courses typically meet during the week (Monday, Tuesday, Wednesday, or Thursday) from about 7:15-10:45 p.m. and/or on weekends on Fridays 6-9 p.m. and Saturdays 8-12 or 8-4 p.m., depending on the class offered.

Phase I - The Foundation Courses (54 hrs)

Courses	Cr Hrs
ACCT 501 and 502 Accounting Principles	4,4
OPN 510 Operations	4
BUSL 500 Business Law	4
ECON 503 and 504 Micro/Macro Economics	5,5
FIN 525 Managerial Finance	4
MATH 163A Calculus	4
MATH 250B Finite Math	4
MGT 500 Management (Introductory)	4
MIS 200 Intro. to Business Computing	4
MKT 501 Marketing Principles	4
QBA 201 Business Statistics	4

Any or all of the required foundation courses may be waived if the student has successfully completed (B or better) comparable courses during recent undergraduate study.

Phase II - Integration (45 credit hours)

Phase II is composed of 45 quarter hours of courses that emphasize the mastery of advanced concepts and managerial skills, as well as the application of knowledge and skills to business problems. Phase II provides for the study of advanced topics in strategy, accounting, finance, marketing, production, human resource management and current business issues.

At the heart of the second phase is a three-course sequence in strategic planning, policy, and operational decision making. These courses are complemented by a series of workshops that focus on the assessment and development of managerial skills, and the completion of either a master's project or the joint student-study project abroad (in concert with students of the full-time program).

Courses	Cr Hrs
ACCT 631 Controllership	4
BA 681 Strategic Planning and Policy	4
BA 682 Operational Decision Making	4
BA 683 Growing and Internationalizing the Company	4
BA 691 Seminar in Current Issues in Business	4
BA 697 Master's Project*	2
FIN 620 Financial Management	4
HRM 600 Management of Human Resources	4
MGT 661 Decision Making and Problem Solving	2
MGT 662 Managing Groups and People	2
MGT 663 Use of Power and Influence	2
MKT 663 Marketing Strategy	4
MIS 691 Management Information Systems	1
OPN 640 Operations Management	4

*May be replaced by BA 698 (2 cr hrs) for the Joint Student Study Project Abroad.

Admission Requirements

Admission to the part-time program is competitive. Criteria for admission include undergraduate grades, graduate school grades (if available), scores on the Graduate Management Admissions Test (GMAT), letters of recommendation, a written essay, and a personal interview. Successful applicants typically have a 3.0 g.p.a. and a score of 500 or higher on the GMAT.

All applicants must submit:

- A graduate application form.
- An official transcript of undergraduate work and any graduate work, if taken.
- Score report from the GMAT
- Three letters of recommendation
- An essay describing one's background, career goals, qualifications, and interest in the M.B.A. program.

Once all application materials have been received, applicants will be scheduled for a personal interview with the director of the program.

Phase I coursework can be started at any time, including summer. Phase II coursework can begin in any quarter, with the exception of 1993-1994 and 1995-1996. During 1993-1994 and 1995-1996, coursework can begin only in the fall quarter with the beginning of the integrated business analysis courses (BA 682, 682, 683) and the managerial competencies courses (MGT 661, 662, 663).

For further information, contact the Director of Graduate Programs, Haning Hall, Ohio University, Athens, Ohio 45701-2979. Phone: 614-593-2007.

THE EXECUTIVE M.B.A.(AT LANCASTER)

The College of Business Administration offers at Ohio University's Lancaster campus an M.B.A. program designed for experienced business executives. The Executive M.B.A. program is structured so that all academic requirements can be completed within two years, even while the executive continues to handle his or her professional responsibilities full-time. This is accomplished by offering courses on three Saturdays and one Friday a month during each of two academic years, with an independent research project completed during the intervening summer.

The program benefits both the company and the executive. Organizations have the opportunity to strengthen management resources, and executives are able to upgrade their managerial skills and to improve their opportunities for advancement into higher management.

The extensive business experience of both faculty and M.B.A. candidates, use of the seminar method for most teaching, and the deliberate attempt to select students from diverse functional areas and businesses provide a stimulating intellectual experience.

It is necessary for each candidate to have a baccalaureate degree, a minimum of seven years of experience on a managerial level, and sponsorship from the employing organization. Candidates also must complete a personal interview.

For detailed information contact Dr. Kahandas Nandola, Director, E.M.B.A. Haning Hall, Ohio University, Athens OH 45701-2979. Phone: 614-593-2028.

M.B.A. Core Courses

601 Core I (18)
Prereq: full-time M.B.A. program candidate. Business-related subjects delivered in modular format. Consists of 18 cr hrs of modular units taken from the following courses: MGT 660, MIS 600, MGT 635, BA 681, MGT 661, FIN 621, MKT 663, OPN 640, ACCT 631, BUSL 691. Units may be added by the faculty team from other 600-level business courses based on the current business environment.
Staff: F.

602 Core II (18)
Prereq: 601. Modular content of business-related subjects. Consists of 14 cr hrs of modular units taken from the following courses: MGT 662, BA 682, BA 683, FIN 620, OPN 641, ACCT 631. Units may be added from other 600-level business courses based on current business environment. Students must take 4 cr hrs of an elective in addition to the 14 cr hrs of business modules.
Staff: W.

603 Core III (18)
Prereq: 602. Modular content of business-related subjects. Consists of 14 cr hrs of modular units taken from the following courses: MGT 663, BA 682, BA 683, FIN 621, MKT 635, MKT 641, OPN 641, BA 698. Units may be added from other 600-level business courses based on current business environment. Students must take 4 cr hrs of an elective in addition to the 14 cr hrs of business modules.
Staff: Sp.

604 Core IV (18)
Prereq: 603. Modular content of business-related subjects. Consists of 14 cr hrs of modular units taken from the following courses: BA 681, FIN 651, MKT 641, OPN 640, MGT 684, BUSL 691, MGT 660. Units may be added from other 600-level business courses based on current business environment. Students must take 4 cr hrs of an elective in addition to the 14 cr hrs of business modules.
Staff: Su.

• Accounting

501 Accounting Principles (4)
Intensive overview of accounting theory, practice, and statement preparation.
Staff: F, Su.

502 Managerial Accounting (4)
Prereq: 501. Uses of accounting information for making managerial decisions.
Staff: W, Su.

503 Intermediate Accounting (4)
Prereq: 502. Fundamental accounting principles and practices emphasizing data accumulation using accounting techniques. Primarily intended for those specializing in accounting.
Staff: F, W.

504 Intermediate Accounting (4)
Preparation and analysis of accounting statements; special problems in accounting for current, fixed, and intangible assets; for liabilities; and for corporate worth; funds and reserves, and investments.
Staff: W, Sp.

505 Intermediate Accounting (4)
Continuation of 504. See 504 for description.
Staff: F, Sp.

506 Advanced Accounting (4)
Problems peculiar to partnerships, fiduciaries, and trusts; governmental accounting; branches, consolidations, and mergers; and foreign exchange.
Staff: D.

507 Advanced Accounting (4)
Investigation of current topics.
Staff: Sp.

510 Cost Accounting (4)
Prereq: perm. Manufacturing cost determination under job-order and process systems. Establishment of standard costs, budgets, and analysis of variances.
Staff: F, W, Su; Y.

513 Government Accounting (4)
Accounting theory for governmental and nonprofit organizations, financial reporting, fund accounting, budgeting, and control.
Staff: W.

517 Federal Income Taxes (4)
Prereq: 217 or equiv. Emphasis on details of federal income tax as it applies to individuals and special provisions which apply to corporations.
Staff: W.

540 Advanced Cost Accounting (4)
Prereq: 510. Analysis of relevant costs for decision making including nonmanufacturing costs. Current cost accounting topics.
Staff: W.

547 Tax Research (4)
Advanced tax problems of individuals, partnerships, and corporations with emphasis on tax research and research methodology.
Staff: W.

551 Auditing Principles (4)
Purposes and scope of audits and examinations; audit principles and procedure; audit reports and certificates.
Staff: W, Sp.

557 Advanced Taxes (4)
Prereq: 517. Tax aspects of corporate organizations, distributions, reorganizations, and liquidations; partnership taxation; Sub S corporations.
Staff: Sp.

601 Accounting Theory (4)
Development of accounting thought, with emphasis on alternative accounting models and different methods used in other countries.
Staff: F; D.

602 Environment of the Accounting Profession (4)
History of the accounting profession and its environment, including regulatory agencies, international standards, and ethical responsibilities.
Staff: W; D.

603 Contemporary Accounting Issues (4)
Research of current issues affecting the accounting profession, with critical analyses of their economic and ethical implications, and communication of the analyses in a professional manner.
Staff: Sp; D.

620 Advanced Accounting Problems (4)
Analysis, interpretation, and solutions of complex accounting problems of the type appearing in official CPA examinations.
Staff: D.

630 Managerial Accounting (4)
Prereq: 501, 502, FIN 525. Planning and control of organizations through internal and external quantitative information, emphasizing techniques and theory of accounting and finance.
Staff: D.

631 Controllership (4)
Prereq: Phase II M.B.A. student. Phase I completed. Uses of accounting data in medium and large organizations. Includes short-run and long-run decision-making techniques, internal control procedures, and the role of accounting data in performance evaluation and motivation of organizational subunits and the individuals within these units.
Staff: F; Y.

691 Seminar (3-5)
Staff: F, W, Sp, Su.

693 Readings (1-15)
Staff: F, W, Sp, Su.

695 Thesis (1-15)
Staff: W, Sp, Su; D.

697 Independent Research (1-15)
Staff: F, W, Sp, Su.

698 Internship (1-4)
Three months of accounting work experience. Requirements include written and oral reports analyzing work experience and academic preparation for professional practice.
Staff: W.

699 Research (3-5)
Staff: F, W, Sp, Su; D.

• Business Administration

545 Small Business Administration (4)
Place of small business organizations in our society; need for organizations in certain segments of business society; problems faced, opportunities involved, and competitive considerations.
W.

570 Administrative Policy (4)
Top management view of decision making affecting future operations of a business, and opportunities, risks, and responsibilities accompanying formulation of company policy and strategy.
Staff; F, W, Sp, Su.

585 International Business (4)
Emergence of U.S. and non-U.S. multinational corporations, scope of their operations, and impact on U.S. economy and consumer.
Y.

681 Integrated Business Analysis: Strategic Planning and Policy (4)
Prereq: Phase II M.B.A. student. Phase I completed. The first of a three-quarter sequence of courses focusing on strategic planning and policy, and managerial decision making. Students are required to analyze a variety of business problems, analyze an industry, and make a series of recommendations. Students serve as managers, making basic strategic and operational decisions in a simulated organization. Final reports are presented to a panel of industry executives.
Staff; F; Y.

682 Integrated Business Analysis: Operations Decision Making (4)
Prereq: Phase II M.B.A. student. Phase I completed. Students are required to prepare and present a business plan for the growth and development of a business firm. Both strategic and operational decisions must be made and defended. This requires the application of analytical techniques and knowledge of functional areas. Entrepreneurial decision making is stressed.
Staff; W; Y.

683 Integrated Business Analysis: Growing and Internationalizing the Company (4)
Prereq: Phase II M.B.A. student. Phase I completed. Students study the strategies, procedures, and opportunities in managing the growth of a company and moving the company into the international arena. Also explored are ethics, leadership, and organizational change. Integration of the operational and strategic decision is stressed.
Staff; Sp; Y.

685 International Business (4)
Prereq: Phase II M.B.A. student. Phase I completed. Not open to students who took BA 585. Surveys environmental and operational issues of international business. Examines the emergence of U.S. and non-U.S. multinational corporations, the scope of their operations, and their impact on the U.S. economy and consumers.

690 Research (3, 4, or 5)
Methodology, data analysis, and preparation of research findings.
Staff; D.

691 Seminar (3, 4, or 5)
Selected topics of current interest.
Staff; D.

693 Readings (1-15)
Readings on topics selected by student in consultation with faculty member.
Staff; F, W, Sp, Su; Y.

697 Independent Research (1-4)
Research in selected fields of business administration under direction of faculty member.
Staff; F, W, Sp, Su; Y.

698 Internship (1-4)
Staff; F, W, Sp; Y.

• Business Law

500 Law and Society (4)
Conceptual approach to origin, nature, structure, functions, and procedures of law with study of contractual relationships.
Staff; F, W, Sp, Su.

542 Law of Property and Real Estate (4)
Property law as institution and analysis of creation, transfer, and relation of various legal interests in property, especially land.
Staff.

560 Law of Health Care Industry (4)
Analysis of public/private contracts in foundation health agencies; experimentation and risk assumption; agency and independent contract liability; reasonable standards of care doctrines; governmental regulations; liability of nurses, doctors, and hospitals.
Staff; W.

562 Law of Estates and Trusts (4)
Law as it pertains to decedents' estates including law of wills, intestate succession, and trusts.
Staff.

565 Law of Sports (4)
Addresses legal issues raised by industry with vast contours. Regulations of amateur athletics, public regulation of sports activities, legal relationships in professional sports, enforcement of professional sports contracts, antitrust aspects of sports activities, liability for injuries in sports activities.
Staff; W.

570 Environmental Law (4)
Legal aspects of individual and societal environmental rights and duties with respect to U.S. Constitution, private property, nuisance, negligence, statutes, regulatory agencies, and court decisions.
Staff; Sp.

575 Government and Business (4)
Governmental regulatory environment of business including analysis of statutes, court decisions, and rulings affecting policy decisions.
Staff.

690 Research (3, 4, or 5)
Methodology, data analysis, and preparation of research findings.
Staff.

691 Seminar (3, 4, or 5)
Selected topics of current interest.
Staff.

693 Readings (1-5)
Readings on topics selected by student in consultation with faculty member.
Staff; F, W, Sp, Su.

697 Independent Research (1-5)
Research on topics selected by student in consultation with faculty member.
Staff; F, W, Sp, Su; D.

• Finance

525 Managerial Finance (4)
Prereq: perm. Role of financial management in business enterprise; financial analysis; planning needs for short-term and long-term funds; planning for profits; capital budgeting; internal management of working capital and income; raising funds to finance growth of business enterprises.
Staff; Sp.

527 Banking and the Financial System (4)
Functions of commercial banking system and other financial institutions. Flow of funds and interest-price movements in money and capital markets. Supply of loanable funds and demand for funds in mortgage loan market, consumer credit market, corporate securities and municipal obligations. Considers effects on financial markets of Federal Reserve and Treasury policies.
Staff; F, Sp; Y.

528 Management of Financial Institutions (4)
Analysis of objectives, functions, practices, and problems of financial institutions as viewed by management of these institutions.
Staff; Sp; Y.

536 Life Insurance (4)
Fundamental economics of life insurance. Principles and practices of life insurance, including types of contracts, group and industrial insurance, and annuities.
Staff; W; Y.

542 Security Analysis (4)
Selection and evaluation of individual securities and industries. Fundamental analysis and determination of intrinsic value based on estimates of payment streams, capitalization rates, and rapidity of price convergence. Technical analysis and study of price-volume, trend following, and crowd psychology.
Staff; Sp.

545 Portfolio Management (4)
Decision-making processes in management of individual and institutional securities portfolios. Theoretical foundations of portfolio selection and construction. Model building and other criteria applicable to selection, risk-return tradeoffs, revision, and evaluation of portfolio performance. Applications of computer technology and other quantitative techniques to different aspects of portfolio management.
Staff: Sp; Y.

555 International Finance (4)
Developing skills to deal with variables influencing financial decision-making for multinational firm and international business. Foreign exchange rate determination, measurement of exposure, and exchange risk management. Study of strategies of entry in foreign markets and investment analysis of foreign projects. Study of working capital management. Study of institutions, practices, and problems related to financing foreign trade.
Staff: F; Y.

561 Problems in Business Finance (4)
Case study of financial management in business enterprises. Planning current and long-term financial needs, profit planning, allocation of funds, raising funds, dividend policies, expansion and combination, recapitalization and reorganization.
Staff F, Sp; Y.

563 Capital Allocation (4)
Planning capital outlays, ranking investment proposals, theories of financial structure and cost of capital, and approaching investment decisions under conditions of uncertainty.
Staff: W.

565 Mathematical Analysis of Financial Decisions (4)
Application of quantitative methods to financial management, with special emphasis on systems approach to evaluating proposed financial decisions.
Staff: D.

620 Financial Management I (4)
Prereq: Phase II M.B.A. student. Will cover financial analysis, planning, control, and various aspects of long-term financing, including equity versus debt, refunding, leasing, and convertibility.
Staff: W; Y.

621 Financial Management II (4)
Prereq: Phase II M.B.A. student. Involves the application of financial theory and analysis techniques to the major financial decisions facing managers. Topics include financing current operations, capital structure, cost of capital, dividend policy, investment decisions.
Staff: Sp; Y.

650 Seminar in Money and Capital Markets (4)
Analysis of conditions in money and capital markets as they affect business decisions; flow of funds in the U.S.; states; structures of interest rates; role of monetary policy and its effects on financial markets; principal instruments and intermediaries in money and capital markets; analysis of important segments of financial markets.
Staff: D.

651 Seminar in International Finance (4)
Prereq: BA 685 and perm. Addresses advanced topics in international finance from both conceptual and practical viewpoints. Topics include foreign exchange risk management, long-term investment decisions for the multinational firm, home and host country sources of financing (including eurocurrency and eurobond markets).
Staff: D.

690 Research (3,4, or 5)
Methodology, data analysis, and preparation of research findings.
Staff: D.

691 Seminar (3, 4, or 5)
Selected topics of current interest.
Staff: F, W, Sp; D.

693 Readings (1-15)
Readings on topics selected by student in consultation with faculty member.
Staff: F, W, Sp, Su; D.

697 Independent Research (1-15)
Research under direction of faculty member.
Staff: F, W, Sp, Su; D.

698 Internship (1-4)
Staff: F, W, Sp; Y.

• Human Resource Management

520 Human Resource Management (4)
Prereq: MGT 200, 300, or 500 or perm. Survey of human resource management practices in areas of human resource planning, recruitment, selection, training and development, performance appraisal, compensation, discipline, safety audits, and personnel research. Includes applications in employment law and discussion of interface of line and staff responsibilities in organization.
Staff: F, W, Sp, Su.

525 Labor Relations (4)
Prereq: MGT 200, 300, or 500 or perm. Study of labor-management relationships, organization campaigns, contract negotiations, grievance procedures, arbitration, and mediation and conciliation. Case studies and class exercises used extensively.
Staff: F, W, Sp, Su.

530 Compensation (4)
Prereq: 420 or 520, QBA 201 or INCO 301 or equiv, or perm. Advanced study of human resource management function of compensation administration. Topics include job analysis, job evaluation, compensation surveys, pay structure design and implementation, benefits administration, and incentive programs.
Staff: Y.

540 Human Resource Training, Development, and Research (4)
Prereq: HRM 420 or 520, QBA 201 or INCO 301 or equiv, or perm. Advanced study of human resource management functions of employee training and development and personnel research. Topics include new employee orientation; training needs analysis; training program design, implementation, and evaluation; applied personnel research methods; and costing human resource programs. Credit not given if student has completed INCO 632.
Staff: Y.

550 Recruitment, Selection, and Appraisal (4)
Prereq: HRM 420 or 520, QBA 201 or INCO 301 or equiv, or perm. Advanced study of functions of recruitment, selection, and performance appraisal in organizations. Topics include recruitment planning and strategy, predictors for employee selection, criteria for evaluating job success, validation strategies, equal employment opportunity and affirmative action programs, and design and administration of employee performance appraisal systems.
Staff: Y.

560 Human Resource Policy, Planning, and Information Systems (4)
Prereq: 425 or 525, 430 or 530, 440 or 540, 450 or 550 or perm. Advanced integrative course serving as capstone in study of human resource management. Students expected to apply their knowledge of human resource strategies, techniques, and constraints through cases, experiential exercises, and other projects. Role of human resource information systems as basis for planning and policy decisions discussed.
Staff: Y.

600 Management of Human Resources (4)
Prereq: Phase II M.B.A. student. Phase I completed. Explores the role of the line manager using the human resources of the organization. Emphasis on the behavioral aspects of human resource management.
Staff: F.

691 Seminar (1-5)
Prereq: perm. Selected topics of current interest in human resource management.
Staff: D.

697 Independent Research (1-5)
Prereq: perm. Research involving some human resource management topic. Topic selection and study are under direction of faculty member.
Staff: D.

• Management

500 Management (4)
Prereq: perm. Management and organization concepts and theory. Emphasis on integration of concepts, case analysis, and application.
Staff: F.

528 Nonindustrial Labor Relations (4)
Prereq: perm. Labor management relations problems and practices in nonprofit organizations such as government (city, county, state, and federal), educational institutions, charity and health

care organizations. Covers such topics as relevant laws and regulations, administrative response to unionization attempts, contract negotiation.
Staff; Y.

530 Management Systems: Decision Making (4)
Decision making and problem solving in organizations from a managerial perspective.
Staff; F, W, Sp.

535 Management of Human and Technological Information Systems (4)
Prereq: 530 or perm. Focuses upon humans and machines as components of formalized information systems. Subject matter approached from systems and procedures viewpoint, with emphasis on management planning and control techniques.
Staff; Y.

540 Organizational Behavior—Micro-Perspective (4)
Conceptual framework of behavioral sciences to management and organizations. Motivation and leader behavior within organizational settings.
Staff; F, W, Sp, Su.

545 Organizational Behavior—Macro-Perspective (4)
Prereq: perm. Organizational theory and behavior emphasizing formal organizational theory and work group behavior. Concentrates on interaction between organization, its environment, and its members and influence of informal work groups on member behavior.
Staff; F, W, Sp.

550 Managing Health Care Organizations (4)
Prereq: 200 or 300. Analysis of basic dimensions of managing health care organizations. Develops conceptual tools for understanding health care management problems and provides practice in analyzing and solving actual health care management problems.
Staff; Y.

580 Business Organizations—Change and Development (4)
Prereq: 500 or perm. Advanced study of the theory of internal change processes and organizational development within business organizations. Topics include role of the manager in the change process, need for change, systems analysis of the change process, identification of change processes, research considerations, use of internal vs. external change agent, and current trends.
Staff; Y.

584 International Comparative Management (4)
Survey and analysis of similarities and differences in management systems, processes, and styles, as well as evaluation of changes and their impact in selected groups of countries.
Staff; Y.

591 Seminar (3, 4, or 5)
Prereq: perm. Selected topics of current interest in management and organizational behavior.
Staff; D.

635 Management of Information Technology (1)
Prereq: M.B.A. student. Phase I completed. Topics include theory of information, role of managers in the processing and flow of information within business organizations, influence of technology on information systems, and interrelationships of technologies as they affect decisions within business organizations.
Staff; D.

660 Introduction to Managerial Competencies (3)
Prereq: Phase II M.B.A. student. Phase I completed. Assessment of behaviors and skills required for effective managerial performance. Based on empirical models of managerial effectiveness, their development and application to student's managerial skills.
Staff; F.

661 Managerial Competencies—Decision Making and Problem Solving (2)
Prereq: 660. Assessment and development of skills related to the process of decision making and problem solving in business organizations. Emphasis on identification of competencies and development/practice of related skills.
Staff; F.

662 Managerial Competencies—Managing Individuals and Groups (2)
Prereq: 661 and HRM 600. Assessment and development of skills necessary to manage people in business organizations. The course is primarily composed of a series of exercises to develop skills such as setting performance standards, providing feedback and reinforcement, facilitating individual and group interactions, and motivating others.
Staff; W.

663 Managerial Competencies—Using Power and Influence (2)
Prereq: 662. Assessment and development of skills related to the effective use of power and influence in a business organization. Includes using power derived from an individual's position, developing power through alliances and coalitions, and being concerned with one's impact on others.
Staff; Sp.

684 International Comparative Management (4)
Survey and analysis of similarities and differences in business management systems, processes and styles, as well as evaluation of changes and their impact in selected groups of nations.

691 Seminar (4)
Selected topics of current interest.
Staff; D.

692 Management Thought (4)
Review of development of managerial theories from 5000 B.C. to present with consideration of their application to present organizational settings.
Staff; D.

693 Readings (1-5)
Readings on topics selected by student in consultation with faculty member.
Staff; F, W, Sp, Su.

694 Management Research (4)
Prereq: perm. Practical application of research methods in behavioral sciences to management problems, emphasizing research available and its use in decision making and in solving managerial problems.
Staff; D.

696 Organizational Behavior—Managing Change (4)
Prereq: 540, 545, or perm. Planning and implementing change in organizational settings.
Staff; D.

697 Independent Research (1-5)
Research in selected fields under direction of faculty member.
Staff; F, W, Sp, Su.

698 Internship (1-4)
Staff; F, W, Sp, Su; Y.

• Management Information Systems

591 Seminar (4)
Prereq: perm. Selected current topics in management information systems.

600 Microcomputer Competency (1)
Prereq: M.B.A. student. Phase I completed. Introduction to word processing and spreadsheet software (e.g., LOTUS 1-2-3) on microcomputers.
F.

691 Seminar (4)
Prereq: perm. Selected current topics in management information systems.
Staff; D.

697 Independent Research (1-5)
Prereq: perm. research under direction of faculty member.
Staff; D.

• Marketing

501 Marketing Principles (4)
Prereq: perm. Emphasis on practices and problems of marketing manager and environment in which he or she operates, supplemented with business cases.
Staff; W; Y.

504 Management of Distribution (4)
Problems encountered by manufacturer in establishing and maintaining effective distribution system, concentrating on channel design and strategies.
Staff; W; Y.

520 Services Marketing (4)
Prereq: perm; 501. Reflects the increasing proportion of GNP taken up by the service sector. Included are the recreation industry, government agencies, financial institutions, profes-

sional services, and industries which do not sell physical goods as their main offering to the public. Consists of lecture, case analysis, and outside assignments. Students analyze materials and write short reports.
Staff: D.

525 Industrial Marketing (4)
Investigation and analysis of problems involved in marketing of industrial products.
Staff: D.

541 International Marketing (4)
Marketing problems, opportunities, and organization of multinational firms to serve overseas markets. Government aids and impediments, and a comparison of markets and marketing techniques in U.S. and foreign countries.
Staff: Sp: Y.

544 Consumer Behavior (4)
Individual, social, and cultural influences that affect consumer behavior. Consideration of explanatory and predictive models.
Staff: F, W, Sp: Y.

546 Sales Forecasting (4)
Forecasting techniques and methodologies applied to estimation of future environments in which business and marketing managers will have to operate.
Staff: Sp: D.

550 Management of Promotion (4)
Problem solving course leading to development and management of firm's promotional mix with emphasis on use of mass media and on stimulation of reseller's cooperation.
Staff: W: Y.

558 Sales Management (4)
Principles and practices in planning, organizing, and controlling sales force. Selection, training, compensating, supervising, and stimulating salesmen. Analysis of sales potentials and costs.
Staff: W: A.

560 Marketing for Nonprofit Organizations (4)
Prereq: 501 or perm. Applies basic marketing principles to organizations which have objectives other than profit. Topics include orienting products and services to clients; identifying internal and external publics, motivating them, and building communication flows with them; and applying marketing research and segmentation analysis.
Staff: D.

561 Social Issues of Marketing (4)
Designed to increase awareness of future marketing managers of contemporary social issues and legal requirements of marketplace. Areas include social critics, past and present, and their criticisms, including excessive promotion, unsafe and unnecessary products, high prices, and possible societal and governmental response to these criticisms.
Staff: A.

562 Product Development (4)
Examination of new product development activities to identify significant factors to be studied and decisions required in researching, manufacturing, and marketing new products.

579 Marketing Research (4)
Techniques involved in collection, tabulation, and analysis of marketing information.
Staff: F: Y.

580 Mathematical Models of Marketing Analysis (4)
Quantitative techniques that can be used in analysis of marketing problems and application of these methods to problem situations.
Staff: W: Y.

585 Advanced Marketing Research (4)
Prereq: 579 or perm. Continuation of marketing research with emphasis on topics not covered in 579. Examples of topics which might be covered: statistical procedures and their marketing applications; brand positioning and market segmentation using marketing research techniques; and managerial cases which use marketing research as a focus.
Staff: D.

635 Managing and Developing New Products (4)
Prereq: Phase II M.B.A. student. Phase I completed. Focus on nurturing innovation, introducing new products, strategic planning for new products, and managing the entrepreneurial firm.
Staff: D. Sp: Y.

641 International Marketing (4)
Prereq: Phase II M.B.A. student. Phase I completed. Not open to students who have taken MKT 541. Students develop skills to make marketing decisions in a global context, such as finding new markets, customizing products for the demands of new markets, discovering which products are wanted by world customers, learning how to reach them, determining appropriate pricing strategies and distribution channels.
Staff: D.

645 Seminar in Consumer Behavior (4)
Behavioral science research as it applies to marketing process.
Staff: D.

663 Marketing Strategy (4)
Prereq: Phase II M.B.A. student. Phase I completed. Analysis of preparation and organization of overall marketing plans, and elements of marketing mix. Also developed are merchandising analyses, objectives, and strategies that take into consideration the ever-changing consumer, trade, and legal environment, as well as firm's costs.
Staff: W.

690 Research (1-4)
Methodology, data analysis, and preparation of research findings.
Staff.

691 Seminar (1-4)
Selected topics of current interest in marketing area.
Staff: D.

693 Readings (1-4)
Readings on topics selected by student in consultation with faculty member.
Staff: F, W, Sp, Su: Y.

697 Independent Research (1-4)
Research under direction of faculty member.
Staff: F, W, Sp, Su: Y.

698 Internship (1-4)
Staff: F: Y.

• Operations

510 Production/Operations Management (4)
Prereq: perm. Introduction to the management of operations in manufacturing and service industries with emphasis on identifying key problems in the areas of design, planning, and control. The utility of various models and quantitative methods in addressing the problems are illustrated.
Staff: Sp: Y.

511 Production/Operations Planning and Control (4)
Prereq: perm. Details, methodologies, and quantitative techniques used in planning and control phases in production/operations are emphasized.
Staff: W: Y.

512 Production/Operations Management Problems (4)
Prereq: perm. Analysis of production management problems in various industries and technologies.
Staff: Sp: Y.

640 Situations, Concepts, and Decisions in Operations Management (4)
Prereq: Phase II M.B.A. student. Phase I completed. Students are introduced to the nature of problems encountered in the management of operations in both manufacturing and service organizations.
Staff: W: Y.

641 Analysis of Advanced Operations Management Problems (4)
Prereq: Phase II M.B.A. student. Phase I completed. Advanced concepts in production operations management are studied. Areas such as forecasting, inventory control, distribution planning, aggregate production planning, scheduling, and quality control are explored.
Staff: Sp: Y.

642 Manufacturing Management (4)
Prereq: perm. A broad introduction to the functional areas of business as they affect the operations of manufacturing organizations. Emphasis on the need to integrate the engineering and technical aspects of manufacturing with broader management concerns to compete successfully.
Staff: Sp: Y.

• Quantitative Business Analysis

500 Mathematical Foundations (4)
Introduction to differential calculus, integral calculus, and linear algebra with economic and business models and application.
Staff; F; Y.

510 Statistical Foundations (4)
Introduction to probability theory, statistical distributions, sampling, estimation, testing, and decision theory for economists and business administrators.
Staff; F; Y.

530 Statistical Quality Control (4)
Prereq: 510 or ECON 501 or equiv or perm. Application of sampling theory to quality control; in process control (e.g., control charts) and sampling inspection (e.g., attribute and variable).
Staff; D.

534 Design of Experiments (4)
Prereq: 510 or ECON 501 or equiv or perm. Nested, split plots; replicated designs; multifactor experiments; compounding fractional factorials; analysis of covariance.
Staff; D.

538 Nonparametric Statistics (4)
Prereq: 510 or ECON 501 or equiv or perm. Appropriate statistical tests; power, asymptotic efficiency; parametric vs. nonparametric; Fisher's randomization method; run test; multi-sample tests; one-way ANOVA and two-way ANOVA miscellaneous tests.
Staff; D.

545 Forecasting Business Trends (4)
Prereq: 510 or ECON 501 or equiv. Forecasting techniques and methodologies as tools used by decision makers to provide a basis for determining future business environments. Forecasting is a means for integrating total corporate planning with technical marketing and financial planning.
Staff; Sp; A.

551 Statistical Survey Techniques (4)
Prereq: 510 or ECON 501 or equiv or perm. Techniques, analysis, and application of sample surveys used in marketing, economics, auditing, and other business functional areas.
Staff; D.

554 Intermediate Probability Theory (4)
Prereq: 510 or ECON 501 or equiv and QBA 371, or perm. Random variables—multidimension (continuous and discrete), moments, moment-generating functions and expected values, limiting theorems.
Staff; W; A.

555 Intermediate Statistical Inference (4)
Prereq: 554 or perm. Estimation, tests of hypotheses, sampling, analyses of variance, design of experiments.
Staff; Sp; A.

556 Regression Analysis (4)
Prereq: 510 or ECON 501 or equiv and QBA 371 or perm. Time sense analysis, simple and multiple regression, and correlation analysis.
Staff; D.

562 Bayesian Decision Analysis (4)
Prereq: 501 or ECON 501 or equiv or perm. Statistical inference and decision making taught from a Bayesian point of view. Comparison made with classical approach where instructive.

571 Statistical Analysis of Data (4)
Prereq: 510 or perm. Topics in applied statistics. Design and analysis of survey samples, ANOVA, modern decision analysis, and time series.

585 Simulation (4)
Prereq: 614 and CS 220 or equiv or perm. Development of models of complex management decision environments and their manipulation via computer simulation. GPSS programming language. Interpretation of simulation results. Application to problems in marketing, finance, and production.
Staff; D.

614 Management Science (4)
Prereq: 500 and 510, or ECON 500 and 501, or equiv or perm. Introductory survey of techniques of management science viewed as part of applied decision theory. Applications in accounting, production, finance, and marketing stressed. Course topics include investing models, linear programming, network analysis, queuing models, simulation, dynamic programming, branch and bound methodology.
Staff; D.

691 Seminar (3-5)
Prereq: perm. Selected topics of current interest in quantitative business analysis areas.
Staff; F, W, Sp.

693 Readings (1-4)
Prereq: Phase II M.B.A. students only. Readings on topics selected by student in consultation with faculty member.
Staff; F, W, Sp; Y.

697 Independent Research (1-4)
Research under direction of faculty member.
Staff; F, W, Sp; Y.

■ CHEMICAL ENGINEERING

(See Engineering, Chemical)

■ CHEMISTRY

Master of Science and Ph.D. programs are offered in analytical, biological, inorganic, organic, and physical chemistry. All degree programs include teaching and research experience.

Although an undergraduate degree in chemistry accredited by the American Chemical Society would provide the strongest foundation for graduate work, many successful students have held either a B.A. or B.S. degree in a physical or biological science or in engineering.

All entering students take standardized examinations in the areas of chemistry in which they have had appropriate undergraduate work (analytical, biological, inorganic, organic, physical). The results are used to determine the level at which a student will begin graduate study. During the first year, a student is expected to complete three courses in the area of major interest and three other elective courses. An acceptable performance on the standardized examinations can lead to an exemption for one or more of these courses. The program of study is flexible to take advantage of the previous training of each student and to meet the particular needs of each individual in his or her specialized area of study.

The M.S. program requires 45 graduate credits in chemistry and approved electives. A seminar course is required each quarter, and the M.S. student must present one satisfactory seminar, usually during the second year of study. An examination is given after one year of study to determine if the student is qualified to continue graduate work. Failure of this examination may lead to a decision that the student cannot receive an M.S. degree. There is no foreign language requirement for the M.S. degree. The average period of study is two and one-half years. The student must defend the thesis orally at a public meeting of his her advisory committee.

The Ph.D. program has no fixed number of required graduate credits; however, a minimum of three Ph.D.-level courses in the major area and three elective courses are required. The student, the major advisor, and an advisory committee will determine the coursework that should be completed. The major advisor will determine the amount of research required for the dissertation. A seminar course is required each quarter, and the Ph.D. student must present two satisfactory seminars, usually during the second and third years of study. A qualifier examination is given after approximately one year of study to determine if the student should continue in the program. A failure of this examination may lead to a decision that the student cannot receive a graduate degree. During the second year of the Ph.D. program, the student takes monthly examinations on subjects announced in advance by the faculty in the student's research area. Four of the first ten examinations offered must be passed for the Ph.D. degree. There is no foreign language requirement for the Ph.D. degree. The student must defend the dissertation orally at a public meeting of his or her advisory committee. The average period of study for the Ph.D. is four and one-half years.

Qualified applicants must apply at least two weeks prior to the quarter in which admission is sought. Most students enter the chemistry program in the fall quarter. Entry during the academic year is possible although not generally encouraged. Although there is no formal deadline for applications for financial aid, early application (by February 15, if applying for fall quarter) is strongly recommended.

500A Advanced Organic Laboratory (2)
Advanced lab techniques and instrumentation.

501 Organic Chemistry Survey (4)
Prereq: perm. Survey of important topics in organic chemistry including structure and bonding, stereochemistry, reaction mechanisms, structural determination, organic synthesis, and bioorganic chemistry.

520 Chemical Literature (4)
Chemical literature in journals, handbooks, monographs, and patents. Scientific writing.

530 Introduction to Toxicology (5)
Prereq: perm. Introduction to chemical, clinical, environmental, and forensic aspects of toxicology, types of poisons, how poisons act, treatment of acute poisoning, and control of poisonous materials.

531 Chemical Separation Methods (3)
Prereq: perm. Modern methods of separating components of complex mixtures with emphasis on operation of, and application to, analytical chemistry. Topics include liquid-liquid extractions, partition chromatography, ion-exchange, gas chromatography, high pressure liquid chromatography, exclusion chromatography, and electrophoresis.

532 Chemical Instrumentation and Electrochemistry (3)
Prereq: perm. Modern electrochemical techniques and instrumentation with emphasis on their application to analytical chemistry. Topics include potentiometry, specific ion electrodes, DC and AC polarography, pulse polarography, coulometry, chronocoulometry, cyclic voltammetry, and rapid scan voltammetry.

533 Spectrochemical Analysis (3)
Prereq: perm. Survey of spectrochemical instrumentation with emphasis on their operation and application in analytical chemistry. Topics include atomic absorption, atomic emission, molecular absorption, and molecular emission, and will cover emission-absorption phenomena in the X-ray, ultraviolet, visible, and infrared regions of the electromagnetic spectrum.

534 Chemical Separation Methods Laboratory (1)
Prereq: 531 or with 531 or perm. Laboratory work to accompany CHEM 531.

535 Chemical Instrumentation and Electrochemistry Laboratory (1)
Prereq: 532 or with 532 or perm. Lab work to accompany 532.

536 Spectrochemical Analysis Laboratory (1)
Prereq: 533 or with 533 or perm. Lab work to accompany 533.

545 Chemistry of Photography (5)
Prereq: grad rank in photography. Basic chemistry of modern and historical photographic and photomechanical materials and processes. 2 lec, 4 lab.

551 Physical Chemistry (5)
Prereq: perm. For graduate students not majoring in chemistry. Includes thermodynamics, thermochemistry, equilibrium, solutions, electrochemistry, and kinetics.

553 Physical Chemistry (4)
Prereq: perm. Calculus-based study of thermodynamics with applications to chemical equilibria.

554 Physical Chemistry (4)
Prereq: 553 or perm. Continuation of 553. Thermodynamics of ionic solutions, kinetic theory of gases, chemical kinetics.

555 Physical Chemistry (4)
Prereq: 554 or perm. Continuation of 554. Introductory quantum theory of simple systems with applications to molecular structure and bonding. Introduction to spectroscopy and statistical thermodynamics.

558 Chemical Thermodynamics (4)
Prereq: perm. Concepts of energy and entropy and their use in predicting the feasibility and extent of chemical reactions.

559 Physical Chemistry (4)
Prereq: 554. Continuation of traditional topics in physical chemistry begun in 553 and 554 to include surfaces, structure of solids, mass and heat transport, electrical conduction, heterogeneous reaction kinetics, photochemistry, and polymer properties.

560 Spectroscopic Methods in Organic Chemistry (4)
Prereq: perm. Modern spectroscopic methods as employed in organic chemical research: NMR, IR, UV, ESR, and mass spectrometry.

571 The Physical Chemistry of Macromolecules (4)
Prereq: perm. Effects of structure and molecular weight on physical and chemical properties of macromolecules. Topics include molecular weight distribution, solubility, polymer conformation, different types of polymers, synthesis, and reactions. Both synthetic and natural polymers considered.

576 Modern Inorganic Chemistry (5)
Prereq: perm. Relationship between physical and chemical properties of inorganic substances and nature of bonding and structures involved.

579 Radiochemistry (5)
Prereq: perm. Application of radiation and radioactive isotopes to problems in chemistry and environmental sciences; detection and determination of radiation; safe handling and disposal of radioactive materials; other problems in environmental radiation safety.

580 Advanced Organic Chemistry (5)
Structural theory, stereochemistry, reactive intermediates, and reaction mechanisms.

586 Advanced Analytical Chemistry (5)
Fundamental principles of instrumental analysis. Electrochemistry, atomic and molecular spectroscopy, gas and liquid chromatography.

587 Forensic Chemistry (7)
Prereq: 533 or perm. Survey of chemical problems most frequently encountered in crime lab and their currently acceptable solutions, as well as special techniques not covered in other analytical chemistry courses. 3 lec, 3 lab.

589 Basic Biochemistry (5)
Prereq: 302 or 307 or perm. Survey course, including introduction to biochemical concepts and techniques, metabolic pathways, and information storage and transmission, with emphasis on directions of current biochemical research.

590 Introduction to Biochemistry (4)
Prereq: perm. Protein chemistry, enzymology, and nucleic acid chemistry.

591 Introduction to Biochemistry (4)
Prereq: 590. Bioenergetics, metabolism, and metabolic control systems.

592 Introduction to Biochemistry (4)
Prereq: 591. Study of integrated molecular systems in biology.

630 Instrument Use and Maintenance (2-4)
Prereq: perm. Technical information concerning operation and maintenance of sophisticated instruments is presented. Includes preparation of users' manuals and videotape presentations that explain and demonstrate techniques. Registration required for students to have access to instruments. Credit allowed more than once, as subjects vary.

695 Research and Thesis (1-15)
Research and thesis as recommended by department.

700 Research Techniques (4)
Prereq: perm. Important skills and techniques of chemical research including glassblowing, vacuum techniques, separation methods, etc.

701 Advanced Organic Chemistry (4)
Prereq: 580. Organic syntheses.

702 Advanced Organic Chemistry (4)
Prereq: 701. Theoretical aspects of organic chemistry.

703 Physical Organic Chemistry (4)
Prereq: 702. Application of modern concepts to structure and reactivity in organic reactions of various mechanistic classes.

704 Heterocyclic Chemistry (4)
Prereq: perm. Theoretical and synthetic aspects.

705 Organometallic Chemistry (4)
Prereq: 576 and 580 or perm. Structure and reactivity of organometallic compounds.

706 Natural Products Chemistry (4)
Prereq: 702. Terpenes, steroids, alkaloids, and other natural products.

710 Special Topics in Organic Chemistry (4)
Prereq: perm. Selected topics of current interest.

711 Protein Chemistry (4)
Prereq: 590 or perm. Topics and techniques relevant to thorough understanding of current status of protein chemistry and enzymology. Includes isolation, purification, and characterization of proteins by standard techniques, active center characterization, and physiochemical features of proteins.

712 Biophysical Chemistry (4)
Prereq: 590 or perm. Applications of physical methods to biological systems, including UV visible, fluorescence, infrared, Raman, and nuclear magnetic resonance spectroscopies.

713 Bioenergetics and the Structure and Function of Biological Membranes (4)
Prereq: 592 or perm. Membrane biogenesis; development and intracellular trafficking; advanced topics in molecular physiology of membranes.

714 Control and Regulation in Molecular Biology (3)
Prereq: 590 or perm. Current concepts in chromosomal structure and function, genetic control of transcription, and translation control of protein synthesis.

715 Advanced Special Topics in Biochemistry (3)
Prereq: 590 or perm.

716 Enzymology (4)
Prereq: 590 or perm. A study of the subjects and techniques relevant to the structure and function of enzymes. Topics include enzyme kinetics, purification, characterization, and active site chemistry. Current research directions such as the construction of catalytic RNA molecules (ribozymes) and catalytic antibodies are emphasized, along with the recent role molecular biology techniques have played in the enzymology field.

726 Electroanalytical Chemistry (5)
Prereq: 532. Fundamentals and applications of potentiometry, conductometric titrations, coulometry, voltammetry, amperometric titrations, cyclic voltammetry, chronocoulometry. 3 lec, 3 lab.

727 Spectrochemical Analysis (5)
Prereq: 533. Modern instrumental methods of molecular spectroscopy including Raman, Fourier transform, IR and NMR, circular dichroism, and mass spectroscopy; recent methods of atomic spectroscopy including plasma sources, diode arrays, and television spectrometers; impact of computerization.

730 Special Topics in Analytical Chemistry (4-5)
Selected topics of current interest: electronics, signal processing techniques, surface analysis, modified and ultramicroelectrodes, hyphenated techniques.

750 Chemical Thermodynamics (4)
Prereq: 558 or perm. Application of thermodynamics to mixtures and solutions to take account of solvent-solute interaction and ionic effects.

751 Statistical Thermodynamics (4)
Prereq: 555 and 558 or perm. Derivation of thermodynamic principles and data from knowledge of size and shape of molecules and laws of mechanics.

753 Chemical Applications of Group Theory (5)
Prereq: 555 or perm. Develops foundations for application of elementary group theory to organize or simplify problems in quantum chemistry. Applications include molecular orbitals, molecular vibrations, and ligand field environments.

754 Chemical Quantum Mechanics (4)
Prereq: 555 or perm. Perturbation and variation theory with application to quantum chemistry; angular momentum; electron-spin; atomic structure. Some matrix theory.

756 Solutions (4)
Selected topics in solution thermodynamics such as stoichiometry, determination of equilibrium constants, activity coefficients, and other thermodynamic properties of solutions; theories of electrolytes: electrochemistry, and transport.

757 Chemical Kinetics (4)
Prereq: perm. Experimental methods of obtaining reaction rates, interpretation of rate data, and relationships between mechanism of reactions and rate equations of reactions.

758 Solid State Chemistry (5)
Prereq: perm. Develops foundation of basic surface science concepts and techniques. These concepts include structure of clean and adsorbate covered surfaces, chemical bonding of adsorbates, energy transfer mechanisms on surfaces, and catalyzed surface reactions.

761 Molecular Structure I (4)
Prereq: 555 or perm. Theoretical principles of rotational, vibrational, and electronic spectra of diatomic and polyatomic molecules.

762 Molecular Structure II (4)
Prereq: 555 or perm. Theoretical principles of nuclear magnetic resonance and electron spin resonance spectroscopy.

763 Radiation and Photochemistry (4)
Prereq: perm. Comparison of radiation and photochemical reactions; primary and secondary processes; general treatment of free radical mechanisms; isolation and detection of free radicals; radiation dosimetry; chemical and biological effects of radiation.

764 Special Topics in Physical Chemistry (3-4)
Prereq: perm.

775 Theoretical Inorganic Chemistry (4)
Prereq: 576 or perm. Theoretical principles underlying physical and chemical behavior of inorganic substances.

776 Chemistry of the Representative Elements (4)
Prereq: 576 or perm. Descriptive chemistry of A-group elements.

777 Chemistry of Transition Elements (4)
Prereq: 775. Descriptive chemistry of transition elements and their coordination compounds.

778 Chemistry of Heavy Elements (4)
Prereq: 775. Descriptive chemistry of lanthanides, actinides, and selected heavy metals.

790 Special Topics in Inorganic Chemistry (3-4)

891 Inorganic Chemistry Seminar (2)
Required of inorganic chemistry majors.

892 Organic Chemistry Seminar (2)
Selected topics from current literature presented by participating students and staff.

893 Analytical Chemistry Seminar (2)
Required of analytical chemistry majors.

894 Physical Chemistry Seminar (2)
Required of physical chemistry majors.

895 Doctoral Research and Dissertation (1-15)
Research and dissertation as recommended by department.

■ CHILD DEVELOPMENT

(See Human and Consumer Sciences)

■ CHINESE

(See Foreign Languages and Literatures)

■ CIVIL ENGINEERING

(See Engineering, Civil)

■ CLASSICAL LANGUAGES

(See Foreign Languages and Literatures)

■ COMMUNICATION

(See Journalism, Interpersonal Communication, Mass Communication, or Telecommunications)

■ COMPARATIVE ARTS

DOCTORAL PROGRAM

The Ph.D. program in comparative arts is an academic program of liberal, humanistic study in the arts of Western civilization. Fundamental emphasis is placed on the ability to deal with works of art on their own terms; that is, the competence to analyze a work in any basic medium using the procedures of accepted modes of analysis within the scholarly tradition of each artistic discipline. But, as our name implies, departmental work is further focused upon the exploration of relationships between works of art and their significant cultural and intellectual contexts. There is no intention in this program to present the student with a choice between scholarship and creative expression. Instead, the program is based on the belief that, for the creative individual, knowledge and understanding of his or her heritage and the development of acute critical abilities can only enhance the creative spirit, not hinder it.

Degree work is thus structured around an historical-theoretical-critical basis, involving period studies in each of the basic artistic disciplines, as well as interdisciplinary seminars.

ADMISSION REQUIREMENTS

A candidate for admission to the program should have completed a master's degree from a reputable, accredited university. This program of study may be in the historical and critical studies of any one of the major art disciplines or in studio or performance fields. Students whose master's degree training is in modern languages, literature, history, or philosophy and who have interest in and some training in arts fields are also encouraged to apply.

Applications for admission should include:

1. Official transcripts of all previous degree work.
2. At least three letters of recommendation from persons qualified to speak of the academic achievement and potential of the applicant.
3. A three- to five-page essay in which the applicant discusses reasons for selection of interdisciplinary work for a graduate degree and a statement of philosophical and practical expectations from such study.
4. Graduate Record Examination scores for the Quantitative and Qualitative Aptitude tests, or the Miller Analogies Test. When at all feasible, the department further recommends a personal interview with each applicant.

Most admissions to the Comparative Arts Program are for fall entry. For such consideration, an applicant is advised to submit all application materials by the beginning of the previous March, as basic admission decisions for the ensuing year are generally made by the middle of the previous April.

PROGRAM REQUIREMENTS

The basic curriculum for the degree consists of the following:

1. Historical-Theoretical Studies: From the arts of theater, music, painting, sculpture, etc., two will be selected as areas of concentration requiring a minimum of six courses in each. In the area not selected as one of the areas of concentration, a minimum of one course is required.
2. Seminar: A full cycle of the Seminar in Comparative Arts, consisting of all six courses, is required.
3. Academic Minor: A minimum of three courses in the social sciences or humanities is required (areas such as history, literature, philosophy, psychology, etc.). (Students whose prior graduate training has included work in one of these areas may petition to transfer sufficient credits to waive this requirement.)
4. Studio Minor: A minimum of three studio or performance courses is required. (Students whose prior graduate training included studio or performance work may petition to transfer sufficient credits to waive this requirement.)

A student is also required, as a part of the total program, to demonstrate proficiency in at least two scholarly tools outside of, but related to, his or her areas of concentration as determined by the graduate committee of the department. The choice is to be made from the following:

1. A reading knowledge of two foreign languages.
2. A reading knowledge of one foreign language plus at least three graduate courses in the literature of that language.
3. A reading knowledge of one foreign language plus satisfactory competence in a related tool (music theoretical systems, statistics, etc. The music theoretical systems option is not open to students with graduate training in a music area).

Upon petition, the department will accept test scores from the Educational Testing Service which demonstrate reading proficiency in a foreign language, provided the test score is at least 600 and no more than three years old.

Minimum course requirements for the degree may ordinarily be completed in six to eight quarters of full-time residency, of which a minimum of three quarters must be continuous. Toward the end of the student's sixth full quarter of study, or when the coursework is virtually completed, and upon recommendation of the graduate committee of the department, the student must take a comprehensive examination. In this examination, the student must demonstrate the ability to make historical, philosophical, and comparative analyses of works of art.

In addition to the requirements stated above, all candidates for the Ph.D. degree in comparative arts must register for six quarters of Seminar in Comparative Arts (895). All candidates for the degree are also required to teach and/or engage in some performance activity as determined and supervised by the department.

A dissertation (and oral defense) which is comparative in nature is the culminating demonstration of a candidate's scholarly abilities.

Requests for financial aid may accompany applications for admission, but applicants should understand that most graduate teaching associateship appointments are made for a nine-month academic year period beginning in the fall quarter.

520X Problems in Comparative Arts (The Fine Arts in Florence) (1-6)
Prereq: enrollment in Ohio University in Italy program. Artistic expression in Florentine life as it may be seen in examples of architecture, painting, sculpture, and music.
Staff; Sp; Y.

581 Individual Problems (1-6)
Prereq: perm.
Staff; F, W, Sp, Su; Y.

581X Individual Problems (1-6)
Prereq: perm; study abroad.
Staff; Sp; Y.

700 Teaching Seminar in Comparative Arts (4)
Prereq: CA grad students. Seminar-practicum designed to prepare TA for assumption of classroom responsibilities. Examines content, method, audiovisual materials necessary to teaching of Introduction to Fine Arts sequence (CA 117, 118).
Haigney; F; Y.

701 Music Theory Systems (4)
For nonmusician graduate students, introducing musical theoretical systems ca. 300 B.C. to present.
Wortman; F; Y.

702 Music Theory Systems (4)
Prereq: 701. For nonmusician graduate students, introducing musical theoretical systems ca. 300 B.C. to present.
Wortman; W; Y.

703 Music Theory Systems (4)
Prereq: 702. For nonmusician graduate students, introducing musical theoretical systems ca. 300 B.C. to present.
Wortman; Sp; Y.

711 Music in Antiquity and the Middle Ages (4)
Cultural history of music to ca. 1410.
Grim; F; A.

712 Music in the Renaissance (4)
Cultural history of music, 1410-ca. 1600.
Grim; W; A.

713 Music in the Baroque Period (4)
Cultural history of music ca. 1600-ca. 1730.
Grim; Sp; A.

714 Music in the Classic Period (4)
Cultural history of music ca. 1730-ca. 1825.
Grim; F; A.

715 Music in the 19th Century (4)
Cultural history of music in 19th century.
Grim; W; A.

716 Music in the 20th Century (4)
Cultural history of music in 20th century.
Grim; Sp; A.

721 The Arts in Antiquity (4)
Prereq: perm. Artistic development between Minoan/Helladic cultures to advent of Constantine.
Staff; F; A.

722 Medieval Art (4)
Art of Europe from Age of Constantine to Art of Giotto.
Staff; W; A.

724 Northern Renaissance Art (4)
Art of Northern Europe in 15th and 16th centuries.
Staff; Sp; A.

725 Italian Renaissance and Mannerist Art (4)
Prereq: perm. Art and history of Quattrocento, Cinquecento Italy.
Staff; Sp; A.

726 Baroque and Rococo Art (4)
Art of 17th and 18th century Europe.
Staff; F; A.

727 Art of 19th Century (4)
European art from French Revolution to 1900.
Staff; F; A.

728 Modern Art (4)
Specific movements and artists since 1900.
Staff; W; A.

729 Arts of the United States (4)
Art in the U.S. from the Colonial period.
Schwindler; Sp; A.

730 Arts of the Orient (4)
Art of India, China, Japan.
Schwindler; F; A.

731 Pre-Columbia Art (4)
Preconquest art of Mexico, Central and South America.
Perant; W; A.

732 African Art (4)
Traditional art of West and Central Africa.
Perani; W; A.

733 Ancient Near Eastern Art (4)
Art of Egypt, Mesopotamia, Assyria, and Babylonia.
Staff; W; A.

734 Seminar in Film I (4)
(For course description, see listing under FILM 633.)
Kirihara; F; Y.

735 Seminar in Film II (4)
Continuation of 734. See 734 for description.
Kirihara; W; Y.

736 Seminar in Film III (4)
Continuation of 734 and 735.
Kirihara; Sp; Y.

770 Greek Theater and Drama (4)
First in series of 8 seminars covering theater and drama of western world in depth from prehistoric times to contemporary.
Haigney; F; A.

771 Roman and Medieval Theater (4)
3 lec.
Haigney; W; A.

772 Renaissance Theater and Drama (4)
Haigney; Sp; A.

773 Restoration and 18th Century Theater (4)
Haigney; D.

774 Baroque European Theater (4)
3 lec.
Haigney; F; A.

775 19th Century European Theater (4)
3 lec.
Haigney; W; A.

776 Contemporary Theater (4)
Haigney; Sp; A.

777 American Theater and Drama, 18th and 19th Century (4)
Prereq: perm. Study of significant movements and major playwrights of the American theater, with an emphasis on the 20th century.
Staff; F.

881 Individual Problems (1-15)
Staff; F, W, Sp, Su; Y.

881X Individual Problems (4-15)
Prereq: study abroad.
Staff; Sp; Y.

890 Fine Arts Historiography (4)
Readings in four areas of fine arts. Research and bibliographical skills emphasized.
Staff; F; Y.

891 Seminar in Comparative Arts (4)
Team taught; F, W, Sp, Y.

895 Dissertation (1-15)
Dissertation as recommended by department.
Staff; F, W, Sp, Su; Y.

■ COMPUTER SCIENCE

The Department of Computer Science does not offer an advanced degree program. However, a student who wishes to study computer science at the graduate level may apply credit for the courses listed below (except 521, 522, and 599) in a master's degree in mathematics. (See Mathematics.)

Courses 521, 522, and 599 are offered to provide programming instruction for graduate students who wish to use the computer as a research tool in various disciplines.

500 Introduction to Discrete Structures (5)
Review of set algebra including mappings and relations. Algebraic structures including semigroups and groups. Elements of theory of directed and undirected graphs. Boolean algebra and propositional logic. Applications of these structures to various areas of computer science.

504 Design and Analysis of Algorithms (5)
Prereq: 561. Correctness of algorithms. Analysis of efficiency of algorithms—recurrence relations, worst-case and best-case behavior, average-case behavior. Design of algorithms: divide-and-conquer and balancing, greedy method, graph searching, dynamic programming, backtracking, branch-and-bound and preprocessing techniques.

506 Computation Theory (5)
Prereq: 500 and PHIL 520. Algorithms, recursive functions, Turing machines, decidability.

510 Formal Languages and Syntactic Analysis (5)
Prereq: 520 and 561. Definition of formal grammars: arithmetic expressions and precedence grammars, context-free and finite-state grammars. Algorithms for syntactic analysis: recognizers, backtracking, operator precedence techniques. Semantics of grammatical constructs: reductive grammars, Floyd productions, simple syntactical compilation. Relationship between formal languages and automata.

511 Concurrent Programming (5)
Prereq: 520, 561 or perm. Emphasizes and compares concurrency issues in programming languages. Remote procedure call, asynchronous buffered message passing, synchronized unbuffered message passing, and shared memory are studied, comparing and contrasting programming techniques appropriate for different communication mechanisms, and assessing the relative effectiveness of the mechanisms in different problem domains. An introduction to Petri Net and its application to designing concurrent software are given.

512 Parallel Computing I (5)
Prereq: 561 or perm. This course is divided into two parts. The first familiarizes students with the variety of approaches to parallel computing and the strengths and weaknesses of each. The second part introduces some of the methods for developing parallel algorithms and analyzes their performance. Different methods for mapping algorithms onto several different parallel architectures and the advantage and disadvantage of each are studied. Algorithms discussed include parallel sorting, searching, and matrix operations.

520 Organization of Programming Languages (5)
Formal definition of programming languages including specification of syntax and semantics. Simple statements including precedence, infix, prefix, and postfix notation. Global properties of algorithmic languages including scope of declarations, storage allocation, grouping of statements, binding time of constituents, subroutines, co-routines, and tasks. List processing, string manipulation, data description, and simulation languages. Run-time representation of program and data structures.

521 Computing for Engineers and Scientists (5)
Prereq: differential equations. Principles and practice of computer solution of problems involving extensive numerical calculations as found in physical sciences, engineering, and numerical mathematics.

522 Computing with Statistical Packages (5)
Prereq: statistics. Approximately half of course devoted to programming solutions to problems using FORTRAN, PASCAL, or PL/1. Emphasis on problem analysis, syntax, testing, and debugging of computer solutions to problems. Second half devoted to study of use of such statistics packages as SPSS for solution of statistical problems encountered in study of social, biological, and educational sciences.

529 Topics in Computer Science for Elementary and Secondary Teachers (1-5)
Prereq: perm. Selected topics in computer science of interest to teachers in grades K-12. (May be repeated for credit.)

540 Computer Organization (5)
Organization of digital computer. Data representation and internal transfer. Digital arithmetic logic unit, control section, and timing. Input-output devices and channels. Software-hardware interfaces.

542 Operating Systems and Computer Architecture I (5)
Prereq: 540. Review of batch process systems programs, their components, operating characteristics, user services, and their limitations. Implementation techniques for parallel processing of input-output and interrupt handling. Overall structure of multiprogramming systems on multi-processor hardware configurations. Details on addressing techniques, core management, file systems design and management, systems accounting, and other user related services. Traffic control inter-process communication, design of system modules and interfaces. System updating, documentation, and operation.

544 Data Communications (5)
Prereq: 542. Introduction to theory and methodology of computer-to-terminal and computer-to-computer communications using

telecommunications facilities. Topics considered: a) development of data transmission techniques for use on existing telephone network; b) standards and protocols for orderly control of data links between processors; c) software for support of data transmission.

556 Software Design and Development (5)
Prereq: 520 and 561. Review of program language structures, translation, loading, execution, and storage allocation. Compilation of simple expressions and statements. Organization of compiler including compile-time and run-time symbol tables, lexical scan, syntax scan, object code generation, error diagnostics, object code optimization techniques, and overall design.

558 Operating Systems and Computer Architecture II (5)
Prereq: 542. Continuation of 542. Assembler language programming of system control functions: interrupt handling, virtual storage management, multiprocessing, clocks, CPU/channel states. PDP11, IBM/370, or multi-user microcomputer systems studied.

561 Data Structures (5)
Prereq: 500. Basic concepts of data. Linear lists, strings, arrays, and orthogonal lists. Representation of trees and graphs. Storage systems and structures, and storage allocation and collection. Multilinked structures. Symbol tables and searching techniques. Formal specification of data structures, data structures in programming languages, generalized data management systems.

562 Files and Data Bases (5)
Prereq: 561. Continuation of 561. Data structures, covering file structures and data bases. Random, indexed sequential, inverted and multilist file structures; concepts of data models, data language, data security, and data integrity. Organization, storage, search, and retrieval methods of hierarchical, network, and relational data models discussed.

564 Information Organization and Retrieval (5)
Prereq: 562. Structure of semiformal languages and models for representation of structured information. Aspects of natural language processing on digital computers. Analysis of information content by statistical, syntactic, and logical methods. Search and matching techniques. Automatic retrieval systems, question-answering systems. Production of secondary outputs. Evaluation of retrieval effectiveness.

568 Data Base Design (5)
Prereq: 542 and 562. Continuation of 562. Objectives and architecture of generalized data base management system (GDBMS). Models of GDBMS' hierarchical, network and relational. Data definition and data manipulation in GDBMS. File organization in GDBMS. External sorting of large data bases. Survey of some commercial GDBMS. Additional selected topics.

580 Artificial Intelligence (5)
Prereq: 520 and 561. Definition of heuristic vs. algorithmic methods, rationale of heuristic approach, description of cognitive processes, and approaches to mathematical invention. Objectives of work in artificial intelligence, simulation of cognitive behavior, and self-organizing systems. Heuristic programming techniques including use of list processing languages. Survey of examples from representative application areas. Mind-brain problem and nature of intelligence. Class and individual projects to illustrate basic concepts.

581 Information Organization and Retrieval Projects (5-15)
Prereq: 556, 564, and instructor's perm. Project course in information organization and retrieval. Each student must complete a project successfully and present results. Lectures by instructor and guest speakers.

582 Artificial Intelligence Practicum (5)
Prereq: 580 or perm. Students work on a major project in one of the basic areas of AI investigation. These include natural language processing, vision simulation, intelligent data base systems, heuristic state-space search, and inferential networks. Emphasis on program self-modification through feedback mechanisms.

590 Special Problems in Computer Science (5-15)
Special project in one of various subfields of computer science or application area studied, investigated, and/ or solved by individual student or small group working in close relationship with instructor. Suitable problems might include construction of compiler for special purpose artificial language, perfection of computer code to solve some significant problem, or study of coherent subfield or computer science. May be repeated for credit.

599 Elementary Topics in Computer Science (1-15)
Special topics omitted in student's undergraduate preparation for graduate study. May be repeated for credit.

601 Mathematical Models of Sequential Machines (5)
Prereq: 500. Definition and representation of finite state automata and sequential machines. Equivalence of states and machines, congruence, reduced machines, and analysis and synthesis of machines. Decision problems of finite automata, partitions with substitution property, generalized and incomplete machines, semigroups and machines, probabilistic automata, and other topics.

612 Real Time Systems (4)
Prereq: 511, 556 and 558 or perm. Discusses real-time systems and their design principles. Studies the particular characteristics of these systems and some real-time programming languages.

613 Parallel Computing II (5)
Prereq: 512 or perm. Continuation of Parallel Computing I. Parallel algorithms discussed include: sorting and fast Fourier Transform, dictionary operations, matrix operations, recurrence relations, partial differential equations, Gaussian elimination, graph algorithms, combinatorial search, and logic programming.

651 Modeling and Analysis of Computer Systems (5)
Prereq: 542, 562, and MATH 550. Computer systems characterized by hardware, software, and operating environment which can be evaluated. Models of portions or functions of batch, time-sharing, or real-time computer systems developed and analyzed. Simulation, queuing, scheduling methods and probability and statistics used as tools.

652 Modeling and Analysis of Computer Systems (5)
Prereq: 651. Continuation of 651.

657A Software Specification (5)
Prereq: 556 or perm. Analysis, specification, and planning of a software system—user's view. Requirements analysis, block diagram and prototype, user manual, test plan, estimates of effort, and schedule of reviews for 657B.

657B Software Design (5)
Prereq: 657A or perm. Module specification, project data base configuration—implementor's view. Module interface specifications, module bodies in Program Design Language (PDL), module test plans, estimates of effort, and schedule of reviews for 657C.

657C Software Implementation (5)
Prereq: 657B or perm. Module body coding, unit test, integration, system test, and acceptance.

■ CONTEMPORARY HISTORY INSTITUTE

The Ohio University Contemporary History Institute, created in 1987, offers a unique course of interdisciplinary graduate level study in the application of post-1945 history to current policy issues. The institute is centered in the Department of History, but it draws faculty and students, as well, from the departments of Economics and Political Science, the School of Journalism, and the Honors Tutorial College.

The institute does not, in itself, grant degrees, but instead offers a certificate in contemporary history that serves as an adjunct to the M.A. and Ph.D. degrees in history, the M.A. degrees in economics and political science, the M.S. degree in journalism, and the Ph.D. degree in mass communication (journalism sequence). The institute's certificate also can be earned in connection with a four-year Honors Tutorial College bachelor's degree in one of the participating departments. Students receive the institute's certificate after completing satisfactorily a sequence of interdisciplinary seminars and tutorials focusing on the content, methodology, and potential applications of contemporary history, and after writing a thesis or dissertation on some aspect of that subject which also meets the requirements of the student's degree-granting department.

ADMISSION

Students should apply for admission to one of the four participating departments: History, Economics, Journalism, or Political Science, using the standard application form contained in the Ohio University *Graduate Catalog*, but indicating "Contemporary History" as the specific area within the graduate major in which they choose to work. Ohio University Honors Tutorial College students should apply through their departmental director of tutorial studies.

The Contemporary History Institute Admissions Committee will evaluate applications only after admission has been granted in one of the participating departments. All applicants to the institute will be automatically considered for fellowships. Students may be contacted individually and asked to provide additional supporting material.

Admission to the Contemporary History Institute is granted *only* for classes beginning in the fall quarter of each academic year. Applications for fall must be received by the previous February 1.

REQUIREMENTS

Requirements for the certificate in contemporary history are as follows:

1. Students will formally enroll in the existing M.A. programs in the departments of History, Economics, or Political Science, the M.S. program in the School of Journalism, or in the Ph.D. programs in the departments of History or Mass Communication (journalism sequence). Fourth-year Ohio University Honors Tutorial College students majoring in one of the participating departments also are eligible. Upon completing all requirements in one of those programs, they will receive the appropriate degree.
2. Within their degree-granting department, students will concentrate no less than half of the required coursework in courses that deal in a substantial way with the post-1945 period.
3. To receive the certificate in contemporary history, students must, in addition, complete the sequence of courses listed below.

601 Introduction to Contemporary History (5)
Investigates the nature of contemporary history: major philosophical and conceptual problems; substantive content; interpretive trends; opportunities for interdisciplinary analysis.
Staff; A.

602 Issues and Sources in Contemporary History (5)
Focuses in detail on several specific substantive issues in contemporary history in relation to the sources available for researching them; training in the use of government documents, newspapers, periodicals, microform materials, and data bases; problems of access, including use of the Freedom of Information Act; problems of evaluating and interpreting such material.
Staff; A.

603 Applications of Contemporary History (5)
Examines potential application of contemporary historical analysis in professional fields such as government, journalism, telecommunications, education, and business; case studies on the uses and misuses of history in these fields; discussion of how the results of historical research can most effectively be communicated in other fields.
Staff; A.

604 Tutorial in Contemporary History (5)
Individual consultation with one or more participating faculty with a view to providing an appropriate intellectual and methodological context for writing the thesis or dissertation on a contemporary history topic in one of the participating departments. Emphasis on interdisciplinary analysis.
Staff; A.

■ DANCE

The School of Dance does not offer an advanced degree program at present. However, a student may include the following graduate courses in an individual interdisciplinary program of study culminating in a master's degree arranged through the Office of Graduate Student Services.

See also the Comparative Arts section of this catalog.

530 Dance Movement Laboratory (1-5)
Prereq: perm. Student investigates individual problems and capacities related to the production of movement. Class explores the means to improve efficiency and expand qualitative range of the mover through application of specific somatic modalities.
Staff; D.

531 Analysis of Dance Movement (2)
Prereq: perm. Explores skeletal alignment and deviation, muscular development and function, and mechanical efficiency in production of dance movement. Basic to course study is thorough understanding of principles of stability and motion as they relate to dance.
Scott.

532 Dance Kinesiology Seminar (2)
Prereq: perm. Offers study and in-depth analysis of kinesiological principles, their application in dance class and to training of dancers.
Walchli.

578 Seminar in Dance History and Criticism (4)
Development of Euro-American dance in the 20th century, with focus on contemporary dance through the present. Research projects.
Staff F; Y.

579 Seminar in Dance History and Criticism II (4)
Tribal forms: survey of dance forms and their functions in societies including mythic rituals and dance-drama. Research projects.
Staff; Sp; A.

580 Seminar in Dance History and Criticism III (4)
Development of Euro-American dance from classic times through 20th century ballet, with emphasis on Baroque, Romantic, and Diaghilev periods. Research projects.
Brooks; W; A.

690 Independent Study (1-10)
Prereq: perm.

694 Internship (1-6)
Prereq: perm. Course provides credit for internship experience. Internship allows individual to gain real experience in field of dance and related areas, e.g., arts administration, apprentice/performing or choreography, technical production.
Bailin; F, W, Sp, Su; D.

■ ECONOMIC EDUCATION

(See Education, Curriculum and Instruction, Economic Education)

■ ECONOMICS

A student beginning graduate work in economics should ordinarily have some undergraduate training that includes courses in the social sciences or business administration. However, a wide variety of areas of concentration relate to or provide appropriate background knowledge for advanced study in economics.

Undergraduate courses in principles of economics, statistics, intermediate micro and macro theory, and some quantitative orientation will ordinarily be deemed prerequisites for graduate work in this area, although a student may be permitted to make up these deficiencies while pursuing a graduate program. In every case the student's undergraduate program must be approved by the department admissions committee prior to the beginning of graduate work. Applicants are urged to take the Graduate Record Examination and submit scores with their applications.

It is preferable that students enter the program during the summer or fall quarters. However, it is possible to begin studies in the winter or spring quarters. For financial assistance it is advisable to apply before March 1 for the following fall quarter.

All students seeking a Master of Arts degree are required to (1) complete a core requirement composed of advanced microeconomic theory (603A & B), advanced macroeconomic theory (604A & B), methodology of economics (685), and colloquium (698); (2) concentrate in one area from the following list of fields: business economics, econometrics, economic history, economic planning, growth, and development industrial organization, international economics, labor economics, monetary economics, natural resources, public finance and policy, and urban and regional economics; (3) pass a comprehensive examination in micro- and macroeconomic theory; and (4) complete a research paper in a topic within the areas of concentration. Additional elective courses may then be used to complete the required 61 graduate hours.

500 Mathematical Economics Foundations (5)
Prereq: perm. Introduction to differential calculus, integral calculus, and linear algebra with economic and business models and applications. Same as QBA 500.

501 Statistical Foundations (5)
Prereq: perm. Statistical methods are developed and emphasized within an econometric context. Fundamental topics include descriptive statistics, characterization of random variables, and hypothesis testing. Specification, interpretations, and economic applications of the general linear regression model are explored.

503 Microeconomics (5)
Prereq: perm. Analysis of prices, markets, production, wages, interest, rent, and profits.

503W Microeconomics (3)
Prereq: perm. Analysis of prices, markets, production, wages, interest, rent, and profits. Accelerated workshop course for M.B.A. students.

504 Macroeconomics (5)
Prereq: perm. Factors determining level of nation's economic activity and growth and stability in nation's economy.

504W Macroeconomics (3)
Prereq: perm. Factors determining level of nation's economic activity and growth and stability in nation's economy. Accelerated workshop course for M.B.A. students.

505 Managerial Economics (5)
Prereq: non-econ; perm. Decision-making in enterprise; market environment, measurement of influence of policy and nonpolicy variables on sales and cost; empirical studies of market structure and pricing. (Not open to students who have had 505W, or graduate students in economics.)

505W Managerial Economics (3)
Prereq: non-econ; perm. Decision-making in enterprises: market environment measurement of influence of policy and nonpolicy variables in sales and costs; empirical studies of market structure and pricing; accelerated workshop course for M.B.A. students. (Not open to students who have had ECON 505, or graduate students in economics.)

506 Monetary Theory and Policy (5)
Prereq: perm. Use of economic theory to formulate monetary policy for minimizing cyclical fluctuations in economic activity.

507 History of Economic Thought (5)
Prereq: perm. Major economic doctrines: mercantilists and cameralists, physiocrats, Adam Smith and classical school, historical school, Austrian school, Alfred Marshall, and neoclassicists.

510 Urban Economics (5)
Prereq: perm. Application of economic analysis to urban problems; urban economic growth and structure (location patterns, land use and environment, urban transportation, and housing); human resources in urban economies and the public sector in a metropolitan context.

511 Inequality of Personal Wealth and Income (5)
Prereq: perm, course in statistics. Quantitative and qualitative differences in wealth and income between low, middle, and high income groups in society using historical, statistical, and mathematical techniques.

512 Economics of Poverty (5)
Prereq: perm. Incidence, causes, and consequences of poverty in affluent society. Economic theory, history, statistics applied to analysis of poverty-reduction measures.

513 Economics of the Environment (5)
Prereq: perm. Economic analysis of such environmental matters as air, water, and noise pollution; population growth; and land use. Emphasis on use of economic theory and empirical research in evaluating environmental policies.

515 Economics of Health Care (5)
Prereq: perm. Allocating resources to health care, economics of hospital care, solution of health care problems, paramedics, prepaid plans, malpractice problems.

520 Labor Economics (5)
Prereq: perm. Economic forces generating modern labor problems; history of labor movement, labor in politics, labor-management relations, wages, full employment.

521 Labor Legislation (5)
Prereq: 520 or perm. Law bearing upon labor problems: labor relations legislation, old-age and unemployment insurance, workmen's compensation, wages-and-hours legislation.

522 Economics of Human Resources (5)
Prereq: perm. Current development in theory, empirical research, and policy with respect to investment in human resources, economic value of education, manpower programs, and growth.

525 Public Policy Economics (5)
Prereq: perm. Survey of economics approach to analyzing public policy issues, uses concepts of welfare economics, public choice economics, and cost-benefit analysis, as applied to samples of policy subjects.

530 Public Finance (5)
Prereq: perm. Role played by government as user of economic resources and redistributor of income; need for government's entry into economy, optimal size of government, selection of tax and expenditure schemes, and effects of government economic activity on the private sector.

531 Economics of Transportation (5)
Prereq: perm. Economics of transport pricing, regulation of transport, and national transport policy.

532 Industrial Organization (5)
Market structure, especially oligopoly, and firm behavior in price and non-price competition. Topics include location, product quality, advertising, research and development, and patent incentives. Emphasis on economic welfare.

533 Government and Agriculture (5)
Prereq: perm. American agriculture as an industry; economics of government policies and programs; consideration of forces and objectives in policy formation.

535 Economics of Energy (5)
Prereq: perm. Economic theory applied to energy policy issues in the U.S., including questions of sources of supply, conservation, pollution control, foreign dependence, monopoly control, special interests, and future generation equity.

537 Government Regulation of Business (5)
Economics of regulated industries. Economic underpinnings, regulatory instruments, and impact on firm and society. Industries of interest include various public utilities, communications, and transportation; also focuses upon product and labor safety.

540 International Trade Theory (5)
International trade patterns, theories of absolute and comparative advantage, classical and modern trade theory, tariffs, quotas, nontariff barriers, preferential trading arrangements.

541 International Monetary System (5)
How exchange rates are determined, fixed vs. flexible rates, government intervention, fiscal and monetary policy in open economy, transmission of inflation and unemployment among nations, international capital movements, covered interest arbitrage, forward exchange, Euro-currency markets.

542 International Economic Policy (5)
Prereq: 540. Current economic developments of foreign and U.S. economic policy. Commercial treaties and tariff policy, exchange rate instability, balance of payments problems including LDC debt situation, international liquidity issues, trade relations among industrial, underdeveloped, and Soviet-bloc countries, multinational corporations, roles of institutions such as World Bank, International Monetary Fund, and GATT.

544 Futures Markets (5)
Prereq: ECON 360, FIN 327, or perm. Course examines futures markets in terms of the instruments traded, the institutional features of the markets, the participants, and their economic strategies, including speculation and hedging. Course describes and analyzes the various futures and options markets to understand how the exchanges operate and to realize the pitfalls and dangers, as well as the possibilities and opportunities of participation.

550 Economic Development (5)
Prereq: perm. Nature of, obstacles to and future possibilities for economic growth of nations; problems of underdeveloped countries; studies of selected countries.

551 Agricultural Development (5)
Prereq: perm. Patterns of agricultural development in U.S. and selected foreign areas; technological and demographic changes in agriculture; socio-economic problems; marketing arrangements; case studies of specific agricultural development projects.

552 Economic History of the United States (5)
Prereq: perm. Economic development of United States. Growth of banking, manufacturing, labor unions, and agriculture from colonial times to present.

553 European Economic History (5)
Prereq: perm. Economic growth of developed countries; industrial revolutions in Great Britain, France, Germany, Soviet Union, and Japan. Historical experiences of these countries related to various theories of economic change.

554 Latin American Economic History (5)
Prereq: perm. Fundamental ssumption is that current problems of economic development of Latin America can be better understood if student has solid knowledge of economic history of region. One-half to two thirds of course will cover economic history with emphasis on larger countries such as Brazil, Argentina, Chile, Peru, and Mexico. Particular attention given to legacies of past which affect current foreign private investment, etc. Latter part of course discusses current problems such as declining terms of trade, import substitution, urbanization, national and regional planning, etc.

555 African Economic Development (5)
Prereq: 550. African societies as traditional economies and in process of modernization.

556 Area Development (5)
Prereq: perm. Analysis of industrial location and urban growth within regions in connection with community, state, and national planning. Consideration of national policies of aiding special regions, such as Appalachia or metropolitan central city. North/South issues in U.S. and in other nations.

561 Monetary History of the United States (4)
Prereq: perm. Correlation of developments in American history with development of monetary institutions, policy, and theory. Evolution of commercial and central banking and relationship to economic activity in history of U.S.

570 Comparative Economic Systems (5)
Prereq: perm. Theoretical and institutional characteristics of capitalism and socialism with emphasis on prevailing economic systems in the U.S., England, and Russia.

571 Economics of Planning (5)
Prereq: perm. Major applications of economic planning to private and public planning; national, regional, local, centralized, and decentralized planning. Procedures and techniques; organization, economic analysis, social accounting, input-output analysis, linear programming, location theory, industrial complex analysis; gravity, potential and spatial models, computers and planning; research and development.

572 Economics of the Soviet Union (5)
Prereq: perm. Operation of Soviet Union economy; allocation of resources; planning, saving, and investment; agriculture; public finance; price system; and international trade.

573 Economics of Southeast Asia (5)
Prereq: 550 or perm. Economic characteristics, development problems, strategies and prospects of countries of Southeast Asia.

574 Economics of Latin America (5)
Prereq: 550 or perm. Economics of Latin American countries, prospects for economic developments of the region, nature and origin of institutional obstacles to economic change. Economic heritage of colonial period and subsequent evolution of economic institutions, resources of the area and utilization, and trends in economic activity and policy in post-WW II period.

575 The Chinese Economy (5)
Prereq: 550. China's early industrialization, 1880-1931; socialist transformation of each economic sector, 1949-1967; overall performance of Chinese economy and each economic sector, and Maoist revision of orthodox Marxist-Leninist economic doctrines.

600 Managerial Economics (5)
Prereq: 303 or 305. Measuring economic relationships, analyzing market behavior, and examining some major economic decisions of business firm.

603A Advanced Microeconomic Theory I (5)
Prereq: perm. Utility analysis, individual demand, and market demand functions. Production and cost behavior of firm under perfect competition, factor pricing under perfect competition, general equilibrium and welfare economics.

603B Advanced Microeconomic Theory II (5)
Prereq: 500 and 501, 603A, or perm. Utility maximization, properties of Marshallian demand function, Slutsky matrix, Hicksian demand function and duality. Technology set, production and input requirement sets, profit maximization, function, supply map, general law of supply and duality. Theory of imperfect markets.

604A Advanced Macroeconomic Theory I (5)
Prereq: perm. National income accounting, classical macro-model, simultaneous equilibrium in goods and money market in Keynesian model. Aggregate supply under flexible wages and fixed nominal wage. Simultaneous equilibrium in goods, money, and labor markets.

604B Advanced Macroeconomic Theory II (5)
Prereq: 500 and 501, ECON 604A or perm. Price expectations, rational expectations, Phillips curves, stabilization policy, new classical macroeconomics, wealth in a macro model, open economy macro equilibrium, and econometric literature of macro models.

635 Econometrics I (5)
Prereq: 500, 501, or perm. Advanced theoretical foundations of linear regression analysis, finite sample and asymptotic properties of estimators, estimation and interpretation of econometric models.

636 Econometrics II (5)
Prereq: 635, or perm. Generalized extensions to econometric analysis. Topics include multicolinearity, non-spherical disturbances, simultaneous equation models, limited dependent variables, and additional deviation from the standard linear model. Projects involving econometric methodology with real life data.

637 Applied Forecasting (5)
Prereq: ECON 501 or perm. Simple forecasting methods, forecasting with econometric approach, time series methods, the Box-Jenkins, and the Arima models. Empirical model building using real-life data and these models.

685 The Methodology of Economics (5)
Prereq: perm. Economics as a scholarly discipline. Nature and role of theory in economics. Relationship between economic theory, hypothesis formulation, and methods of empirical testing of hypotheses.

691 Seminar in Economics (2-6)
Prereq: perm. Seminars in following general areas: theory and thought; growth and development; monetary and fiscal; theory and policy; labor and human resources.

693 Readings in Economics (1-6)
Prereq: perm. Readings in selected fields in economics under direction of staff member.

696 Master's Seminar (5)
Prereq: perm. Writing of scholarly papers in areas of economics. (Required of all master's candidates.)

697 Independent Research (1-12)
Prereq: perm. Research in selected fields in economics under supervision of staff member.

698 Colloquium (1)
Selected topics of current interest. Required of all graduate students.

EDUCATION

Applied Behavioral Sciences and Educational Leadership

- Counselor Education
- Educational Leadership
  - College Student Personnel
  - Educational Administration
  - Higher Education
- Educational Research and Evaluation

Curriculum and Instruction

- Economic Education

Educational Media
Elementary Education
Secondary Education
Special Education

Professional Laboratory Experiences

The College of Education offers the following graduate degrees:

Master of Arts
  Economic Education
Master of Education (with emphases in):
  Counselor Education—elementary, secondary, community, college, rehabilitation, or counseling in business and industry
  Educational Administration
  Educational Media
  Elementary Education
  Higher Education
  Mathematics Education
  Microcomputers in Education
  Reading
  Secondary or Middle School Education
  Special Education or Teaching of Talented and Gifted
  Student Personnel Services
  Supervision
Educational Specialists Certificate (Educational Administration)
Doctor of Philosophy (with emphases in):
  Counselor Education—college, community, elementary, secondary
  Curriculum and Supervision
  Economic Education
  Educational Administration
  Higher Education

Instructional Technology
Mathematics Education
Middle School Education
Reading and Language Arts
Social Studies Education
Student Personnel Services

MASTER'S PROGRAMS

A student who wishes to major in a given area must have a program of study planned and approved by a faculty advisor to meet his or her future professional needs and objectives.

Minimum number of credit hours varies from area to area, depending on program requirements and standards for certification, when applicable. Specific criteria for admission and requirements for various program areas are available upon request from the Office of Graduate Studies, College of Education.

Master's programs are offered in several areas of professional education. Specific areas of emphases are listed above. Additional information is included under Applied Behavioral Sciences and Educational Leadership and Curriculum and Instruction.

DOCTORAL PROGRAMS

Advanced preparations which lead to the Doctor of Philosophy degree are offered in the School of Applied Behavioral Sciences and Educational Leadership and the School of Curriculum and Instruction. Processes for application and admission are listed under the two schools.

In addition to a major area of emphasis, a student may select, with the help of a doctoral program committee, other minor area(s) in professional and/or cognate fields within Ohio University.

A student admitted to the doctoral program is expected to apply for admission to advanced studies after two quarters of coursework. Admission is based upon review of the student's progress, faculty recommendations, completion of at least nine hours of course credit, and results of a qualifying examination.

Doctoral candidates are required to successfully complete a written and oral comprehensive examination and an acceptable dissertation.

A student is assisted throughout his or her program of study by a faculty advisor and a doctoral program committee.

Specific information regarding criteria for admission, financial assistance, scholarships, etc., is available from the Office of Graduate Studies, College of Education, McCracken Hall.

Special Note for Students in Education: Any student who has earned a master's degree in education at Ohio University and who plans to take additional coursework in education must reapply for admission through the Office of Graduate Student Services, Ohio University.

▼ Applied Behavioral Sciences and Educational Leadership

The School of Applied Behavioral Sciences and Educational Leadership prepares individuals for professional positions in schools, colleges, and community agencies. Graduates function in a variety of roles including administration, supervision, counseling, consultation, teaching, and research. Programs are designed to meet state certification and licensure requirements where applicable, in addition to providing flexibility to meet specific student competency needs and interests.

Individuals who wish to pursue graduate study in the School of Applied Behavioral Sciences and Educational Leadership (SABSEL) must meet established graduate requirements and be accepted by the appropriate program faculty. There are two degree-granting programs within the school. Those two programs are: (1) Educational Leadership; and (2) Counselor Education. An applicant for a master's degree program who does not have a 2.9 overall (4-point scale) or a 3.25 g.p.a. on the last 90 quarter hours (4-point scale) will be required to submit a test score from the Graduate Record Examination (verbal and quantitative) or the Miller Analogies Test. Applicants for the doctoral program must submit the results of both the Graduate Record Examination (verbal and quantitative) and the Miller Analogies Test. An applicant for the Educational Specialist Program must possess a master's degree from an accredited institution of higher education. Applicants at all levels must submit letters of recommendation and autobiographies, and may be required to appear for interviews. Ph.D. applicants will be required to take a writing test at the time of the admission interview.

Anyone considering graduate work in SABSEL should arrange to complete the application process well in advance of the quarter in which he or she expects to begin study. Applicants who have not yet taken the Graduate Record Examination and/or the Miller Analogies Test within the past five years should note that this examination is administered only on certain specified dates throughout the year and that the interval between administration and receipt of scores is ordinarily six weeks.

Students may apply for scholarships, graduate associateships, and fellowships. All students accepted for graduate associateships do research or are assigned teaching responsibilities in the College of Education.

Further information regarding programs and admissions procedures may be obtained from the School of Applied Behavioral Sciences and Educational Leadership, McCracken Hall, Ohio University, Athens OH 45701-2979, or by calling 614-593-4440.

• *Counselor Education*

Programs in community counseling, rehabilitation counseling, and school counseling are offered, leading to a graduate degree in counselor education. Within these programs, individuals may emphasize courses and field work leading to professional counseling careers in the areas of elementary, middle school, secondary school, college counseling, business and industry, chemical dependency, agency work, and private practice. Doctoral-level work also leads to these positions, plus supervisory and university faculty positions.

The Community Counseling Program is designed for those interested in professional counseling services in a community mental health center, in private practice, or in other agencies or business settings that provide health and social services. The program meets academic requirements necessary to become an Ohio Licensed Professional Counselor (LPC) with the option of completing the additional academic hours for a clinical endorsement in mental health counseling (Ohio Licensed Professional Clinical Counselor, LPCC). It also meets academic and experience requirements for becoming a National Certified Counselor (NCC).

The Rehabilitation Counseling Program meets the needs of personnel presently employed in public and private rehabilitation agencies, as well as graduates in such areas as psychology, sociology, education, and human services. Upon completion of the program, graduates will have met LPC and NCC academic requirements, and they may sit for the examination to become a Certified Rehabilitation Counselor (CRC).

The School Counseling Program is for those who wish to practice as elementary or secondary school counselors. It meets the academic and counseling experience requirements to receive State Department of Education Certification as a school counselor in Ohio and in most other states, and also meets academic requirements for LPC and NCC.

A master's degree program consists of a minimum of 72 quarter hours of study and can be completed in six to eight quarters of full-time attendance, depending upon the area of concentration. Many core courses are offered in summer quarter, and many late afternoon and evening classes are available during the regular academic year to accommodate students with full-time employment. Along with a counseling practicum (120 work experience hours), two quarters of required internship (600 total work experience hours) provide extensive experience.

The doctoral program in counseling is psychological in content, experience, and nature. Ph.D. degree specializations are available in counseling, counselor education, supervision, and research and evaluation. The courses of study leading to degrees in the above areas combine personal growth, theoretical foundations, research methodology, and practical experience relevant to the specialization of choice. They are designed on the basis of the specialty sought and the background brought to the program by the student. The array of courses included in the curriculum may be used to meet the requirements for professional certification or licensure. However, it is the student's responsibility to consult the credentialing agencies to determine exact requirements of specific agencies. Students should be aware that such credentialing agencies periodically change their qualification requirements. The program requires a minimum of 135 quarter hours beyond a bachelor's degree and 90 quarter hours beyond a master's.

Approximately 25-35 M.Ed. students and 8-14 Ph.D. students are admitted each year. Academic credentials, experience, and compatibility of personal characteristics and professional goals with advanced study in the field of counseling and counselor education are all taken into consideration in the evaluation process. Students may apply for admission at any time; however, most admissions and financial aid decisions are made in the spring for fall quarter entry.

Undergraduates interested in such work will find knowledge in the areas of the behavioral and social sciences, including psychology, education, sociology, and communications, most helpful.

Those interested in school counseling will be required to have teaching certification for work in Ohio and many other states.

All degree programs in counselor education are nationally accredited. Community counseling (M.Ed.), school counseling (M.Ed.), and the Ph.D. program in counselor education and supervision are accredited by the Council for Accreditation of Counseling and Related Programs (CACREP); the M.Ed. rehabilitation program is accredited by the Council on Rehabilitation Education (CORE); and all College of Education programs, including Counselor Education, are accredited by the North Central Association of Colleges and Secondary Schools and the National Council for Accreditation of Teacher Education. Such accreditation can be advantageous in gaining professional credentials and employment after graduation.

For further information, contact the coordinator, Counselor Education.

520 Elementary School Counseling (4)
Prereq: perm. Rationale, scope, and nature of elementary school guidance; multiple approaches to provision of guidance services with emphasis upon role of elementary school counselors in child study counseling, consultation, classroom group guidance and coordination, and curriculum development.
Hazler; F, Su; Y.

521 Counseling, Teaching, and the Behavior Change Process (5)
Prereq: perm. Theories of behavior-change process in educational, community, and business settings. Application and evaluation of techniques to modify behavior which involve counselor clients and the counselor in the behavior change process with effective communication emphasized.
Staff; D.

522 Career Development: Research and Theory (4)
Prereq: 520 or 530 or 541. Theories, practices, methods, and processes of career development for varied settings: school, community, business; review programs which develop career planning/life components; exploration of career education and counseling opportunities; review and/or implementation of career-related research.
Navin; F, Su; Y.

525 Foundations of Rehabilitation Counseling (4)
History and development of counseling of individuals with disabilities. Other topics covered include philosophy, counseling process, place of rehabilitation counseling in community, legislative aspects, and overview of agency activities.
Beamish; F; Y.

526 Medical Issues in Rehabilitation (4)
Overview of basic anatomy, physiology, and the normal functioning of body systems. Emphasis on medical aspects of disability; psychosocial and vocational implications; and importance of incorporating a sense of wellness.
Levers; W; Y.

528 Psychosocial Aspects of Disability (4)
Explores the emotional and social factors contributing to disabilities, the interaction of these factors in the rehabilitation process, and the role of the rehabilitation counselor in understanding the dynamics of disability.
Levers; Sp; Y.

529 Job Placement Theory and Techniques (4)
Provides rehabilitation counselor trainees with requisite skills to perform job analyses, suggest job modifications or restructuring, conduct job development activities that affect successful job placement for disabled individuals.
Beamish; Y.

530 Foundations of Counseling (4)
Prereq: perm. Rationale, scope, and nature of counseling services in educational, community, and business settings; multiple approaches to provision of such services with emphasis on role of counselor in needs assessment, program planning, counseling, consultation, coordination of services, and curriculum development for diverse populations. Study of problems, issues, trends, and ethical responsibilities in the field of counseling.
Hazler; F, Su; Y.

531 Appraisal I (4)
Prereq: perm; 520 or 530 or 541. Concepts of reliability and validity as applicable to appraising human characteristics set stage for considering critical role that clinical judgment plays in professional helping. Emphasis on basic appraisal techniques, including diagnostic interviewing, observational systems, rating scales, interactional analysis, and educational and psychological testing. Testing portion provides introduction to intelligence, achievement, aptitude, perceptual, vocational, and personality (objective and projective) measures.
Levers; W; Y.

545 Counseling Over the Life Span (4)
Prereq: 520, 525, 530, 541. Implications of life-span development issues for counselors. Issues in counseling and counseling needs throughout the life span will be explored. Techniques and strategies for counselors to use in dealing with the needs of persons of different ages will be covered.
Navin; W, Su; Y.

550 Counseling in Groups (5)
Introduction to group processes and their application in a variety of settings. Topics include history, theory, techniques, group dynamics and counseling, group leadership, ethics, research and evaluation, lectures, demonstrations, and group lab experience.
Staff; Sp, Su; Y.

555 Counseling Theory and Techniques I (5)
Prereq: perm. Didactic phase includes a review of the basic counseling competencies applicable to all theoretical approaches. Affective, behavioral, and cognitive-oriented approaches to counseling also discussed from a general perspective. The lab phase of the course allows students to practice the counseling competencies addressed in the classroom.
Davis; F, Su.

570 Organizational Theory and Techniques in Counseling and Personnel Services (4)
Prereq: 520 or 530 or 541. Identification of need for counseling and human resource development programs in the workplace. Employee assistance programs, training and development, and career development issues addressed. The course content can be considered for a variety of work settings such as business and industry, educational institutions, and mental health facilities.
Davis; W; D.

610 Field Experience in Counseling (1-12)
Prereq: perm. Supervised field work in educational or community setting selected with regard to professional needs and interests of individual student. Student should have a clear idea of type of field experience desired and required setting for the experience before enrollment. Course requirements will include on-site supervision by staff, regularly scheduled on-campus conferences, and progress and terminal reports.
Staff; D.

620 Readings and Research: School Counseling (1-5)
Prereq: perm of instructor (may be taken for total of 12 hrs). Study and interpretation of professional literature on counseling and other guidance services provided in elementary, secondary, and vocational school settings, as well as 2-yr colleges. Independent and directed projects.
Staff; F, W, Sp, Su.

621 Readings and Research in Community Counseling (1-5)
Prereq: perm (may be taken for total of 12 hrs). Study and interpretation of scientific research on community mental health or selected government agencies. Independent and directed projects.
Staff; F, W, Sp; Y.

623B Special Topics Seminar: Stress, Biofeedback, and Self-Control (1-3)
Prereq: perm (may be taken for total of 18 hrs). Provides overview of holistic approach to well-being, nature, and sources of stress and distress, effects of distress upon mind-body systems, and methods that are important for developing physical and mental relaxation, cognitive intervention, and assertive behavior. Specific applications in occupational and life settings suggested.
Witmer; F.

623C Special Topics Seminar: Marriage and Family Counseling (1-3)
Prereq: perm (may be taken for total of 18 hrs). Analysis of factors contributing to marital and family dysfunction. Development and implementation of selected counseling models and strategies commonly used in working with couples and families.
Beamish; F; Y.

623D Special Topics Seminar: Assertiveness Training (1-3)
Prereq: perm (may be taken for total of 18 hrs). Focuses on theory and strategies of assertiveness training. Attention to goal setting, role playing, alternative behavior, evaluating consequences; and implementation of assertive behavior. Emphasis on differentiating nonassertive, assertive, and aggressive behavior.
Navin; D.

623E Special Topics Seminar: Counseling and Human Sexuality (1-3)
Prereq: perm (may be taken for total of 18 hrs). Study of human sexualness and stereotypical attitudes, attainment of basic knowledge, awareness of sexual abuse and violence, and understanding sexual dysfunction and sexual adequacy.
Hartman; D.

623F Special Topics Seminar: Adlerian Theory, Methods, and Research (1-3)
Prereq: perm (may be taken for total of 18 hrs). Theory, research, and applications of individual psychology in educational, community, business, and private practice settings. Counseling, consultation, and psychotherapy methods and techniques will be demonstrated.
Sweeney; D.

623G Special Topics Seminar: Human Relations Skills for a Multicultural Society (1-3)
Prereq: perm. Provides for understanding of human relations skills for effective interpersonal communication. Focus on skill development, cultural and value differences among ethnic, racial, religious, and other groups. These skills have generic application for helping professionals in educational, community, family, work, and leisure time settings.
Staff; D.

623H Special Topics Seminar (1-3)
Prereq: perm (may be taken for total of 18 hrs). Seminar topics include areas of study in human potential, rehabilitation counseling, normal and dysfunctional physical, mental, and emotional development.
Staff.

638 Gerontological Counseling (3)
Attitude awareness regarding older persons, knowledge of developmental periods of aging, basic gerontological counseling concepts, and skills in applying knowledge of aging and counseling to work with older persons are emphasized.
Sweeney; D.

652 Laboratory: Group Counseling (5)
Prereq: 550 or perm. Advanced study of group theory, research, and applications. Group dynamics, leadership styles, and techniques are examined as they apply to various settings. Lecture, demonstration, and group lab experiences.
Hartman; W; Y.

655 Counseling Theory and Techniques II (5)
Prereq: 555 or perm. Didactic phase of the course will focus upon specific theoretical orientations of counseling. These include individual psychology, rational emotive, behavioral, gestalt, reality, and multimodel theories of counseling. The lab phase of the course will allow students to practice theoretical approaches addressed in the classroom.
Davis; W; Y.

660 Chemical Dependency Counseling (3)
Prereq: perm. Focuses on the addictive process, stages and symptoms of chemical abuse, and intervention and treatment strategies for addiction.
Davis; F, Su; Y.

662 Diagnosis and Treatment Planning in Counseling (4)
Prereq: perm. Emphasis on diagnostic and treatment process facing the mental health professional. Provides an opportunity to familiarize oneself with the diagnostic and statistical manual of mental disorders, as well as an opportunity to interpret and make diagnostic assessment with a confederate client. In addition, alternative treatment and planning are reviewed.
Davis; Sp; Y.

664 Mental Health Consultation (3)
Introduction to the theory and process of mental health consultation as practiced in such settings as social service, rehabilitation, child care, community mental health agencies, prisons, schools, employee assistance programs, health maintenance organizations, and private practice.
Hazler; Sp; Y.

685 Multicultural Education (4)
Provides understanding of cultural, ethnic, and racial differences and similarities in American society. Focuses on preparing professionals in educational, community, and leisure settings for working successfully with America's multicultural population.
Doston; F, Su; Y.

691 Seminar in Education (4)
Prereq: 35 grad hrs, EDRE 501, perm. Student chooses area important to him or herself, engages in library research, interviews, questionnaires, etc., and writes a substantial, scholarly paper. Students must submit a proposal to the instructor by the ninth week of the quarter prior to the quarter of enrollment.
Staff; F, W, Sp, Su; Y.

695 Thesis (2-10)
Staff; F, W, Sp, Su; D.

700A Advanced Counseling Practicum: School (5-15, max 15)
Prereq: advanced standing, perm. Students conduct supervised counseling sessions. Preparing case notes, consulting with other professionals, critiquing audio- and videotapes of their counseling sessions, participating in practical seminars, etc., is part of the experience. Students must submit an application for admission to the practicum the quarter before expected enrollment.
Staff; F, W, Sp; Y.

700B Advanced Practicum: Community (5-15, max 15)
Prereq: advanced standing, perm. Students conduct supervised counseling sessions. Preparing case notes, consulting with other professionals, critiquing audio- and videotapes of their counseling sessions, participating in practica seminars, etc., is part of the experience. Students must submit an application for admission to the practicum the quarter before expected enrollment.
Staff; F, W, Sp; Y.

700C Advanced Practicum: College (5-15, max 15)
Prereq: advanced standing; perm. Students conduct supervised counseling sessions. Preparing case notes, consulting with other professionals, critiquing audio- and videotapes of their counseling sessions, participating in practica seminars, etc., is part of the experience. Students must submit an application for admission to the practicum the quarter before expected enrollment.
Staff; D.

700D Advanced Practicum: Rehabilitation (5-15, max 15)
Prereq: advanced standing, perm. Students conduct supervised counseling sessions. Preparing case notes, consulting with other professionals, critiquing audio- and videotapes of their counseling sessions, participating in practica seminars, etc., is part of the experience. Students must submit an application for admission to the practicum the quarter before expected enrollment.
Staff; F, W, Sp; Y.

710 Counseling Internship (8-16)
Prereq: advanced M.Ed. standing, perm. A culminating experience providing counseling and related services to clients in educational, community, and business settings. Services may include functions related to special problems and populations. On-site supervision by staff is required, along with regular on-campus conferences.
Staff; F, W, Sp; Y.

720 Advanced Seminar in Counseling (2-15)
Prereq: advanced standing, perm. Doctoral seminar providing students with preparation for in-depth study of counseling in educational, community, and business settings.
Sweeney; F.

722 Career Development and Counseling (4)
Prereq: advanced standing, perm. Methods and practices in career planning and decision making; career patterns and theories; counseling services that promote career and vocational development and research.
Navin; W; D.

731 Appraisal II (5)
Prereq: 531. Special attention devoted to intelligence theory and tests (e.g., Stanford-Binet and Wechsler instruments); case data interpretation; and report writing and communication of appraisal results to other professionals.
Staff; W; Y.

732 Advanced Appraisal (5)
Prereq: 531 and practicum. Advanced appraisal techniques reviewed, with particular attention to personality measures. Both objective and projective techniques considered, and each student is expected to develop applied expertise with a method of each type. Actual case appraisals analyzed and critiqued; integration of data from a variety of appraisal procedures and professional communication of results emphasized.
Davis; Sp; A.

735 Counseling the Exceptional (4)
Prereq: advanced standing, perm. Characteristics of exceptional individuals; developing and implementing counseling services for exceptional individuals in educational, business, and community settings.
Staff; D.

736 Counseling and Behavioral Aspects of Special Populations (4)
Prereq: advanced standing, perm. Intervention and treatment of special populations such as substance abuser; counseling and intervention for disenfranchised, including emotionally, mentally, and physically disabled, incarcerated; and study of cultural and sociological influences on culturally different and implications for counseling.
Staff; D.

740 Family Counseling Practicum (2-5)
Prereq: 623C, 821C. Supervised counseling experiences with families.
Staff; D.

750 Practicum in Group (5, max 15)
Prereq: perm. Supervised experiences in group counseling in a variety of community mental health, university, business, and/or school settings. Individualized readings and study of group counseling theory and techniques.
Staff; D.

755 Counseling Theory Advanced (5)
Prereq: perm. Theories and systems of psychology as applied to counseling and psychotherapy. Integration of theories and methods of counseling and psychotherapy to assessment and diagnosis, goal-setting, treatment, procedures, and evaluation of progress and outcomes. Use of case study to demonstrate knowledge in the treatment of selected mental, emotional, and behavioral disorders. Application of concepts of human development to personal growth and career-life planning. Review of innovative methods, recent research, and issues and trends.
Beamish; Sp; Y.

759 Counselor Supervision (2-4)
Prereq: adv. standing and/or clinical counseling, field exp., or perm. Offers advanced graduate students theories and models of clinical supervision used in the counseling profession. Students participate in both didactic and lab activities.
Davis; F.

760 Counselor Education (4)
Prereq: perm. Counselor education history and development including standards, selection, and retention policies and practices, program design for pre- and in-service training, and current issues and research.
Hazler; D.

761 Practicum in Counselor Education (5-15)
Prereq: perm. Experience in program development and professional counselor preparation activities. Includes supervising of, consulting with, and education of pre- and in-service counselors. Other activities may include student and staff evaluation; organization of personnel programs; and use of staff meetings for counselee study, staff consultation, and program management.
Staff; F, W, Su, Y.

762 Legal and Ethical Aspects of Counseling Community, Personnel Services (4)
Prereq: perm. Law and ethics considered for educational and mental health contexts. Federal, state, and local statutes relevant to professional functioning, and rights of persons receiving counseling, and psychological services considered. Court decisions, critical cases, and legislation analyzed and interpreted. Code of ethics for counselors, psychologists, and human service workers reviewed. Guidelines for ethical behavior in delivery of services.
Witmer; F.

763 Advanced Practicum in Specially Oriented Community Services (5)
Prereq: perm. Doctoral-level practicum and seminar providing indepth practical experience in selected human services in varied colleges and universities, community agencies, and other non-educational settings.
Staff; D.

800 Internship (10-15)
Prereq: perm quarter prior to enrollment. Internship may be taken at pre- or post-doctoral level. Intern works full-time in professional setting consistent with program emphasis for at least two quarters of full-time work or three quarters of half-time work.
Sweeney; F, W, Sp, Su.

821B Special Topics Seminar: Stress, Biofeedback, and Self-Control (1-3)
Prereq: perm (can be taken for total of 18 hrs). Overview of holistic approach to well-being, nature and sources of stress and distress, effects of distress upon mind-body systems, and methods important for developing physical and mental relaxation, cognitive intervention, and assertive behavior presented. Specific applications in occupational and life settings suggested. Students expected to review and critique papers on selected literature.
Witmer; D.

821C Special Topics Seminar: Marriage and Family Counseling (1-3)
Prereq: perm (can be taken for total of 18 hrs). Analysis of factors contributing to marital and family dysfunction. Development and implementation of selected counseling models and strategies commonly used with couples and families. Individualized project, and/or supervised counseling experience required. Review and critique papers on selected literature expected.
Beamish; F; Y.

821D Special Topics Seminar: Assertiveness Training (1-3)
Prereq: perm (can be taken for total of 18 hrs). Focuses on theory and strategies of assertiveness training. Attention to goal setting, role-playing, alternative behavior, evaluating consequences, and implementation of assertive behavior. Emphasis on differentiating nonassertive, assertive, and aggressive behavior. Review and critique papers on selected literature are expected.
Navin; D.

821E Special Topics Seminar: Counseling and Human Sexuality (1-3)
Prereq: perm (can be taken for total of 18 hrs). Study of human sexualness and stereotypical attitudes, attainment of basic knowledge, awareness of sexual abuse and violence, and understanding sexual dysfunction and sexual adequacy. Review and critique papers on selected literature are expected.
Hartman; D.

821F Special Topics Seminar: Adlerian Theory, Methods, and Research (1-3)
Prereq: perm (can be taken for total of 18 hrs). Theory, methods, and research related to individual psychology and its applications to educational, community, business, and private practice settings. Counseling, consultation, and psychotherapy methods and techniques will be demonstrated. Review and critique papers on selected literature expected.
Sweeney; D.

821G Special Topics Seminar: Human Relations Skills for a Multicultural Society (1-3)
Prereq: perm. Provides for understanding of human relations skills for effective interpersonal communication. Focus on skill development, cultural and value difference among ethnic, racial, religious, and other groups. These skills have generic application for helping professionals in educational, community, family, work, and leisure time settings. Review and critique papers on selected literature are expected.
Staff; D.

821H Special Topics Seminar (1-3)
Prereq: perm (can be taken for total of 18 hrs). Other seminar topics include areas of study in human potential, rehabilitation counseling, normal and dysfunctional physical and emotional development, etc.
Staff.

823 Advanced Readings and Research in Counseling and Student Personnel (1-10)
Prereq: advanced standing, perm. Independent studies and specialized projects for doctoral students.
Staff; F, W, Sp, Su; Y.

825 Colloquium (1, max 3)
Prereq: perm. Doctoral level seminars to examine contemporary issues in counselor education.
Staff; D.

852 Advanced Laboratory in Applied Group Dynamics (5)
Prereq: perm. Group experience as method of studying and applying selected theoretical models of group counseling. Participants experience membership and leadership roles. Individual readings and research on selected group counseling models.
Staff; D.

895 Dissertation (2-15)
Prereq: perm.
Staff; F, W, Sp, Su; Y.

• *Educational Leadership*

The area of educational leadership consists of college student personnel, educational administration, and higher education.

The primary mission of this program area is to prepare people for educational leadership roles in a variety of institutions, agencies, organizations, and enterprises. Education, or the teaching and learning process, occurs not only in traditional institutions such as schools and colleges but also in business and industry, social and governmental agencies, the military, and health care organizations.

The program accomplishes its mission through (1) a series of didactic, clinical, research, and experiential courses offered at the M.Ed., 6th year, and Ph.D. levels; (2) life-long learning opportunities specifically designed for practitioners; (3) student and faculty research; and (4) service to the profession.

The development of leadership is viewed as equally significant at each degree level and in each concentration within the program area. However, the amount of emphasis placed on the study of the component parts (individual, organization, and society) may vary among areas of concentration and with degree levels.

The program also differentiates levels of emphasis on application, actualization, and theoretical conceptualizations from one degree level to another. That is, the master's programs focus primarily on the development and application of skills, while doctoral programs emphasize the study, development, and testing of theoretical concepts. Students progress through the degree levels from M.Ed. to Ph.D., with increasing integration among the components of the individual, organization, and society.

College Student Personnel

The focus of the master's degree College Student Personnel Program is upon the knowledges, values, attitudes, and skills needed for the entry level professional. These tasks are primarily direct services to students, and are educational and developmental in nature; therefore, the program emphasizes the role of the college student personnel professional as a student development educator.

The master's degree is a two-year program. The focus of the doctoral program is on the administration of student personnel programs, although through the selection of cognate areas and electives, strength in other student personnel emphases is encouraged. The primary function of the doctoral program in student personnel is to prepare professionals for student personnel positions at the vice-presidential, dean, assistant/associate vice-presidential or director level, or to prepare college faculty to teach in graduate-level programs in student personnel.

520 Introduction to College Student Development Services (4)
Prereq: perm. Introduction to field of student personnel including history and development of profession, roles, and functions of student personnel professionals, and an overview of student personnel services.
Dressel, Pearson; F; Y.

521 College Student Development: From Theory to Practice (4)
Prereq: 520. Provides an understanding of college student development theories and how they are applied in student affairs.
Pearson; W.

522 College Campus/Student Environment: From Theory to Practice (4)
Prereq: 520. Provides an understanding of college environment theories and their application.
Pearson; Sp.

544A Student Activities/Unions (2)
Prereq: 520. Study of college unions, theories related to the student activities profession, campus programming, Greek life, leadership development, and student organizations. Future trends, professional organizations and standards, and several models of college unions and student activities are included.
Staff; W.

544B Student Behavior and Judiciaries (2)
Prereq: 520. Focuses on functions, conceptual bases, ethical concerns, research, and applications in judiciaries.
Staff; Sp.

544C Residence Life/Housing (2)
Prereq: 520. Provides students the opportunity to develop knowledge about the college student personnel specialty area of housing/residence life.
Staff; W.

544D College Career Services (2)
Prereq: 520. Focuses on the field of career planning and placement and its role and function as one component of college student personnel services. Includes a perspective on how and why the field developed, current practice, current and historical issues, legal and ethical issues, and the future outlook.
Staff; F.

544E Admissions and Financial Aid (2)
Prereq: 520. Study of the professional principles of good practice, management, and conduct of the admissions and financial aid functions in higher education.
Staff; Sp.

544F Orientation/Advising/Developmental Education (2)
Prereq: 520. Explores the philosophical base, organizational patterns, management styles and practices, and evaluation methods used in the areas of orientation, academic advising, and developmental education in higher education.
Staff; Sp.

544G International Student Services: Advising and Administration (2)
Prereq: 520. Focuses on the rationale for foreign student services, the functions and services performed, and the relationship of foreign student services to institutions of higher education and international education.
Staff; W.

544H Health and Wellness Programming and College Counseling Centers (2)
Prereq: 520. A study of the principles, functions, and practices of health education and wellness programs and college counseling centers, their organization, administration, and role in college student personnel services.
Staff; F.

544J Adult Students and Services (2)
Prereq: 520. An overview of the college student personnel specialty area of Adult and Continuing Higher Education. Academic and student service programs specifically designed for adult learners are examined.
Staff; W.

544K Two-Year College Student Personnel (2)
Prereq: 520. The study of the application of student personnel practices in the two-year college setting.
Staff; Sp; D.

544L Computer Applications in Student Personnel (2)
Prereq: 520. Provides student personnel students with a working knowledge of computer applications in the student personnel profession. Students master skills necessary to understand the use of computers in their field and to use the computer as a tool.
Staff; F.

603 Practicum in Student Personnel (3-6)
Prereq: perm (must be taken 3 times for total of 12 hrs). Supervised experiences in student personnel offices of the University or of neighboring educational institutions.
Dressel, Pearson; F, W, Sp.

620 Administration and Organization of Student Affairs Programs (4)
Prereq: 522, EDAD 601. Relates theories and practices of leadership, decision making, organization, and administration to student personnel programming in higher education.
Dressel; W.

622 Readings and Research in Student Personnel (1-12)
Prereq: perm. Survey, analysis, interpretation, and synthesis of professional literature on college student personnel. Independent, directed research project in area of college student personnel.
Dressel, Pearson; F, W, Sp.

720 College Student Personnel: Theories and Research (4)
Prereq: perm. Introduction of college student personnel field including history, development of the profession, and roles, functions, and issues in the profession.
Dressel, Pearson; F; Y.

721 College Student Development: Theories and Research (4)
Prereq: perm. In-depth study of the major theories of college student development which are used in college student personnel. Emphasis on understanding and critiquing the theories and related research.
Pearson; F.

722 College Student-Environmental Interactions (4)
Prereq: advanced standing, perm. Explores several person-environmental theories, emphasizes assessment of environment for purposes of changing environment to foster student development.
Pearson; W.

743 Advanced Seminar in Student Personnel: Current Issues (2)
Prereq: perm. Seminar format concerned with specific professional issue each qtr such as legal issues or professional develop-

ment; research and guests used extensively. May be repeated for a total of 8 hrs.
Dressel, Pearson; F, W, Sp.

803 Advanced Practicum in College Student Personnel (3-6)
Prereq: perm. Doctoral-level practicum and seminar providing in-depth experiences in selected student affairs offices on various campuses.
Dressel, Pearson; F, W, Sp, Su.

820 College Student Personnel Administration and Organization Theories and Research (4)
Prereq: perm. Study of selected theories of administration, organization, and leadership with specific application to student personnel operations in higher education.
Dressel; Sp.

890 Advanced Readings and Research in College Student Personnel (2-6)
Prereq: perm. Independent studies and specialized projects for doctoral students.
Dressel, Pearson; F, W, Sp, Su.

Educational Administration

Educational administration offers course sequences that lead to the educational specialist certificate and to the Master of Education and Doctor of Philosophy degrees. Students seeking certification may work toward the following administrative certificates: elementary principal; secondary principal; assistant superintendent; superintendent; or administrative specialist in business management, research, staff personnel administration, instructional services, pupil personnel administration, special education, or school and community relations.

601 Introduction to Educational Administration (4)
Prereq: perm. Nature and critical tasks of educational administration, problems and issues, purposes, situational factors, processes; qualifications for the job, personal assessment, preparation, in-service training, professional opportunity, and challenge.
Staff; F, Su.

602 Organizational Structure in Education (4)
Prereq: perm. Considers general organizational theory as applied to the existing structure of schools and other educational agencies such as colleges, universities, private, and alternative schools.
Staff; W; Su.

603 Human Behavior in Educational Organizations (4)
Prereq: perm. Provides potential leaders of educational institutions with the theoretical knowledge and skills necessary to function effectively within the human element of educational organizations.
Staff; Sp, Su.

611 Educational Law (5)
Prereq: 601 or perm. Selected principles of constitutional, statutory, case, and common law affecting schools and school personnel with special reference to Ohio school law.
Staff; Sp.

621 Educational Finance (5)
Examines economics and education; educational finance as type of public finance; theories, concepts, and issues related to programs designed to achieve equalization of educational opportunities; local, state, and federal programs of financial support for education.
Staff; F.

631 Personnel Administration in Education (4)
Prereq: 601. Organization and implementation of personnel functions. Covers organizational structure, staff procurement, staff selection, staff development, and conditions of service for people in the organization. Competencies in course conceptually oriented to provide understanding of personnel process.
Staff; F.

640 The Principalship (4)
Prereq: 9 hrs incl 601. Leadership theories and practices. School/community organization; social-political forces; instructional leadership; teacher appraisal; elementary, middle, and secondary school administration.
Staff; F.

641 The Principalship—Skill Competencies (4)
Prereq: 9 hrs incl 601. Designed for persons aspiring to become administrators. Individualized approach to developing job skills for specific tasks in elementary, middle, and secondary schools in actual job setting and simulated settings.
Staff; W.

661 Public Relations in Education (4)
Principles, program organization, agents, and media in effective public relations; models of communication; attitude change; development of problem situations and simulations of practical problem-solving techniques; examples from public school administration, higher education administration, and sports administration.
Staff; F, Su.

671 Community Education (4)
Prereq: perm. Introduction to philosophy of community education with emphasis on role of school administrator in conceptualizing philosophy and then taking leadership in developing and implementing community education programs.
Staff.

690 Research in Educational Administration (6)
Prereq: perm, 601. Individual research studies.
Staff; F, W, Sp, Su.

691 Seminar in Education (4)
Prereq: 35 grad. hrs., EDRE 501, perm. Student chooses area of study, engages in library research, interviews, questionnaires, etc., and writes a substantial, scholarly paper. Students must submit a proposal to the instructor by the ninth week of the quarter prior to the quarter of enrollment.
Staff; F, W, Sp, Su.

695 Thesis (2-10)
Prereq: perm.
Staff; D.

702 State and National Administration of Education (4)
Prereq: 601. State program of education, state responsibility, educational organization, certification and tenure, national problems in education.
Staff.

703 Administration of Education in Other Countries (4)
Prereq: 601. Programs, organizational structure, and control of education in other countries. U.S. assistance programs for educational administration in developing nations.
Staff.

731 Conflict Management in Educational Administration (4)
Prereq: perm. Theories, attitudes, techniques, and strategies for managing conflict, solving problems, negotiating, and decision making in educational organizations. Focuses on understanding conflict and persons involved. Practice for third party mediators, as well as conflict participants.
Staff; W.

734 Competency Development in Personnel Administration (5)
Prereq: 631, perm. Practicum designed to develop competency to perform effectively in area of personnel administration. Includes all aspects of personnel administration as a team concept. Specific competencies developed include writing policy, staff selection, staff evaluation, establishing record systems, career counseling, salary administration, and meeting organizational and staff needs. Competencies developed in terms of actual situation.
Staff.

740 Special Problems of the Principalship (2-6)
Prereq: perm; master's degree; practicing principal. Critical appraisal of major problems and issues in elementary, middle, and secondary school administration. Individual and group study procedures.
Staff.

742 Planning Educational Facilities (5)
Prereq: 601 or perm. Helps student to gain an appreciation for importance of facilities to educational enterprises. Acquaints student with principles, processes, and problems involved in identification of need for planning and acquisition of new facilities and for improvements to existing facilities.
Staff; Sp.

751 Business Administration in Education (4)
Prereq: 601 and perm. Helps student develop increased awareness of and appreciation for role and function of business administration in total educational enterprise. Promotes understanding of major task areas and competencies required to become knowledgeable about current theories and recommended practices in administration of business affairs in education.
Staff; W.

752 Problems in Administration of Education (1-6)
Prereq: perm. Intensive course or workshop for practicing educational administrators. Content of each offering specially selected

to meet needs of particular group being served. Amount of credit will depend upon length of course.

A. Administration in Bilingual Settings
B. Business Administration
C. Collective Bargaining in Education
D. Community Education
E. Conflict Management in Educational Administration
F. Educational Facilities Planning
G. Educational Finance
H. Educational Law
I. Leadership
J. Personnel Administration in Education
K. Planning and Evaluation in Education
L. The Principalship
M. School-Community Relations
N. The Superintendency
O. Pupil Transportation
P. Politics of Education

780 Politics and Local School Administration (4)
Prereq: perm. Examines ideas related to political power and educational decision making, community power structure, school board member nomination and election, politics and innovations, and administrator's base of influence in community.
Staff; Sp.

784 Educational Planning and Evaluation (5)
Prereq: perm. Intended to help advanced graduate students gain better understanding of theories related to and systems and techniques employed in comprehensive planning and evaluation in educational enterprises of all types and levels, and help students gain some competence in application of those theories, systems, and techniques.
Staff; Sp.

791 Leadership Project—Problem Identification (4)
Prereq: perm. Individualized field-oriented course designed to assist practicing educator in conducting systematic, in-depth studies to identify critical problem areas in selected phase of school system operation.
Staff; F, W, Sp, Su.

792 Leadership Project—Implementation (4)
Prereq: perm. Individualized field-oriented course to assist practicing educator in developing skills in identifying techniques and strategies for implementing change related to critical problem areas identified in 791.
Staff; F, W, Sp, Su.

793 Leadership Project—Analysis and Evaluation (4)
Prereq: perm. Individualized field-oriented course to assist practicing educators in identifying and using techniques for analyzing their practices in implementing change. Complete leadership project (791, 792, and 793) culminates in a written analysis and evaluation under direction of student's advisor.
Staff; F, W, Sp, Su.

811 Legal Aspects of Educational Administration (4)
Prereq: 611. Intensive study of selected aspects of both case and statutory law, constitutional basis for education, schools in their legal setting, school legislation, and relevant court decisions. Extensive reading in an approved law library required.
Staff.

824 Seminar in Educational Finance (5)
Prereq: perm. Helps students gain greater depth of understanding of theories, practices, problems, and issues to foster an increased competence in financing educational enterprises.
Staff.

831 Seminar in Collective Bargaining in Education (4)
Prereq: perm. Gives students understanding of collective bargaining movement in education through simulation, readings, guest lectures, media presentations, and discussions. Each student assigned a bargaining team which has responsibility for negotiating a contract. Attention given to analyzing contracts between selected employee groups and boards of education, impasse resolution, and contract administration.
Staff; W, Su.

844 Seminar in Educational Facilities (5)
Prereq: perm. Helps students gain greater depth of understanding of and competence in planning of educational facilities and administration of building programs.
Staff.

854 Seminar in Business Administration in Education (5)
Prereq: perm. Helps students gain understanding of and competence in administration of business affairs in education.
Staff.

864 Seminar in Public Relations (5)
Prereq: 661, perm. Special topics, new concepts, and specific techniques for public relations in public, private, higher education, and sports administration; in-depth investigation of problems of specific interest.
Staff.

881 Organization in Educational Systems (4)
Prereq: perm. Study of organizational and systems theories and analysis of organizational systems. Study of implications of such theories and systems for educational administration.
Staff.

890 Research in Educational Administration (2-6)
Prereq: perm of advisor. Individual research studies.
Staff; F, W, Sp, Su.

895 Dissertation (2-15)
Prereq: perm.
Staff; F, W, Sp, Su.

Higher Education

Higher education focuses on administration and teaching. In administration, the program focuses on preparing individuals for supervisory, coordinating, and leadership positions in higher education. Required coursework examines the background of higher education, along with the study of internal organizational standards, policy perspectives, and the principles of finance and governance.

In college teaching, the program assists students from various academic disciplines in examining pedagogy, along with curriculum development on the collegiate level. Coursework provides the student with an opportunity to examine the theory and practice of college teaching, as well as methods of self-improvement.

The area of institutional research, at the doctoral level only, is designed for those interested in research and long-range planning for institutions of higher education. Analysis of current curricula, enrollment, and financial options promote comprehensive institutional self-study and strategic planning.

590 Higher Education (4)
Background and growth of higher education in the U.S. Present status of various types of institutions.
Miller, Pearson; F, Su.

591 Community Colleges and Branch Campuses (4)
Prereq: 590 or perm. Special problems related to administration of community and junior colleges, branch campuses, vocational and technical colleges, and adult education programs.
Miller; F, Su; Y.

592 Teacher Education (4)
Prereq: perm. Teacher education in the U.S., its history, current status, and current issues. For those planning to teach in colleges and universities that prepare teachers.
Miller.

690 Seminar: Current Issues in Higher Education (1-9)
Prereq: 590, perm. On-going, up-to-date treatment of significant current developments in higher education.
Miller; F.

780 Dynamics of College Teaching (4)
College teaching examined as to its meaning, intent, current practice (including observation in University classes), and potential improvement.
Staff; W.

781 Directed Experiences in College Instruction (1-10)
Prereq: perm. Individualized program under guidance of instructor or department which would include field study and experience in college teaching.
Staff; F, W, Sp.

782 Curriculum Development in Higher Education (4)
Prereq: advanced standing, perm. Critical study of factors and issues involved in curriculum development. Types of curricula and underlying philosophies. Curriculum research and evaluation in higher education.
Staff; Sp.

783 Institutional Research and Self-Study in Higher Education (4)
Prereq: advanced standing, perm. Problems of institutional research office including institutional need and methods of data collection and reporting. Principles of long-range planning.
Miller; W.

784 Practicum in Higher Education Administration (3-6)
Prereq: perm. Practice in working under supervision in special administrative office in the University including offices of president, vice presidents, academic deans, business offices, etc.
Staff; F, W, Sp, Su.

785 Administration in Higher Education I: Structure and Organization (4)
Prereq: advanced standing. In-depth study of internal organizational patterns and structure of a variety of institutions of higher learning. Policy perspectives in higher education.
Miller; W.

786 Administration in Higher Education II: Control and Support (4)
Prereq: advanced standing, perm. Principles and problems of finance in higher education. Focus on internal fiscal management, as well as on social policies underlying financial support of higher education.
Miller; Sp.

787 Problems in Higher Education (4)
Prereq: perm. Intensive study of 1 or more problems in contemporary higher education: administration, structure, law, finance, curriculum, etc.
Staff; F, W, Sp.

821 Special Topic Seminar (1)
Prereq: perm. Seminar treatment of areas of current or topical interest in field of higher education. (May be repeated for credit.)
Staff; W.

823 Readings and Research in Higher Education (1-3)
Prereq: perm. Independent study and specialized research projects for advanced students in field of higher education. (May be repeated for credit.)
Staff; F, W, Sp, Su.

• *Educational Research and Evaluation*

In addition to the courses provided in this program, the research staff provides services to both faculty and graduate students in the areas of research design, statistics, educational measurement, and computer use. Laboratory facilities, including programmable calculators, card punch, two computer terminals, and access to a library of statistical computer programs are available.

501 Introduction to Research Methods (4)
Methods of research in education. Selecting, planning, and evaluating research problems.
Barcikowski, Johanson; F, W, Sp, Su; Y.

510 Educational Measurements (4)
Construction of tests, item analysis, and statistics for test scores. Reliability, validity, and standard scores.
Johanson; F, W, Sp, Su; Y.

690 Readings in Educational Research and Evaluation (1-4)
Prereq: perm. Guided readings course, tailored to meet needs and interests of individual students, in selected topics in educational research, measurement, statistics, and evaluation.
Staff; D.

692 Special Projects in Educational Research and Evaluation I (1-8, max 8)
Prereq: 6 hrs in area and perm. Individual research in problem areas in educational research, statistics, measurements, and evaluation. May be a theoretical or critical evaluation of recent research in some area in regard to objectives, content, and methodology. Projects may be individual or small groups.
Staff; D.

693 Seminar in Educational Research and Evaluation (1-5)
Prereq: perm (may be repeated for total of 10 hrs). Special problems in elementary education, guidance, secondary education, and school administration.
Staff; D.

695 Thesis (2-10)
Prereq: perm.
Staff; D.

711 Techniques of Test Development (5)
Prereq: perm. Construction of evaluation instruments for research and classroom use, item analysis techniques, criterion-referenced and norm-referenced testing, reliability, and validity.
Johanson; W.

712 Research in Educational Measurements (5)
Prereq: 711 and 720, or perm. Measurement and scaling theory, factor analysis, research in selected measurement topics, and item response theory with applications.
Johanson; Sp; Y.

720 Educational Statistics (5)
Tabulation and graphical representation of frequency tables, measures of central tendency, percentiles and percentile curves, measures of variability, standard scores, normal curve, simple regression, correlation, point estimates, testing statistical hypotheses, confidence intervals, t-distributions, chi-square distributions, and F-distributions. Use of computer statistical packages.
Barcikowski, Johanson; F, Su; Y.

721 Regression Analysis in Education (5)
Prereq: 720. Multiple and multivariate regression, one-way and two-way analysis of variance (univariate and multivariate), contrasts. Use of computer statisical packages.
Barcikowski; W, Su; Y.

722 Multivariate Methods in Education (5)
Prereq: 721. Factor analysis, canonical correlation analysis, discriminate analysis, higher order factorial designs, nested designs, analysis of covariance, and repeated measures designs. Use of statistical packages.
Barcikowski; Sp; Y.

723 Questionnaires and Nonparametrics Statistics in Education (5)
Prereq: 720 or perm. Emphasis on questionnaire design and analysis using nonparametric statistics. Scaling, sampling, and selected parametric procedures are included.
Barcikowski, Johanson; W; D.

724 Research in Educational Statistics (4)
Prereq: 722 or perm. Interpretation of research studies from statistical viewpoint. Emphasizes examination of research designs involving statistics. Use of computer for statistical analysis.
Barcikowski; D.

731 Computer Science Applications in Education I (5)
Prereq: 720 or perm. Application of data processing and computer science techniques to problems in education.
Barcikowski, Johanson; F, Su; Y.

732 Computer Science Applications in Education II (5)
Prereq: 721 and 731 or perm. Advanced application of data processing and computer science techniques to problems in education.
Barcikowski, Johanson; W, Su.

733 Research Design in Education (5)
Prereq: 720 and 721, concurrent. Critical evaluation and development of research studies. Emphasis on development of problems which admit to scientific investigation, statement of hypotheses, definition of terms, problems of sampling, statistical methods, and interpretation and generalization of findings.
Barcikowski, Johanson; Sp; Y.

790 Advanced Readings in Educational Research and Evaluation (2-8)
Prereq: perm (max 15 hrs). Guided readings course, tailored to meet needs and interests of individual students, in selected advanced topics in educational research, measurement, statistics, and evaluation. May be a theoretical or critical evaluation of recent research in some area in regard to objectives, content, and methodology. These projects may be individual or small groups.
Staff; D.

792 Special Projects in Educational Research and Evaluation II (2-10)
Prereq: perm (max 15 hrs). Individual research in problem areas in research and evaluation. May be a theoretical or critical evaluation of recent research in regard to objectives, content, and methodology. Projects may be individual or small groups.
Staff; D.

793 Advanced Seminar in Educational Research and Evaluation (1-6)
Prereq: perm (may be repeated for a total of 15 hrs). Advanced seminar in selected topics in educational research and evaluation, including current trends, issues, and techniques.
Staff; D.

895 Dissertation (2-15)
Prereq: perm.
Staff; D.

▼ Curriculum and Instruction

The School of Curriculum and Instruction offers programs of graduate study designed to meet the academic and professional requirements of those involved in teaching, curriculum development, and supervision.

Master's degree programs are offered in curriculum and instruction, including emphases in elementary education, middle school education, reading, secondary education, special education, supervision, educational media, teaching of the talented and gifted, teaching of mathematics, economic education, and microcomputers.

The doctoral program in curriculum and instruction is designed to prepare curriculum and supervision workers to serve as change agents in schools, two year community or technical colleges, and/or university settings. The Ph.D. program provides a core of experiences in educational foundations, curriculum, and instructional theories, and a specialization in one of the following areas: curriculum and instruction, reading and language arts, social studies education, supervision, economic education, mathematics education, or instructional technology.

Individuals who wish to pursue graduate study in education must meet established graduate entrance requirements and be accepted by the graduate committee of the school. Depending upon the grade-point average earned as an undergraduate, an applicant for master's degree study may be required to submit the results of the Graduate Record Examination (verbal and quantitative) or the Miller Analogies Test. Applicants for doctoral study must submit Graduate Record Examination scores (verbal and quantitative) and Miller Analogies Test scores.

Students not seeking a degree may pursue graduate courses on a nondegree basis in a planned program of professional development.

Anyone considering graduate work in education should arrange to complete the application process a month in advance of the term in which he or she plans to begin study since the Graduate Record Examination may be taken only on certain dates throughout the year. Applications for financial aid should be submitted by March 15 to receive consideration for the following academic year.

For more information about programs, contact the Director, School of Curriculum and Instruction, College of Education, McCracken Hall, Ohio University, Athens OH 45701-2979.

500 History of Western Education (4)
Prereq: perm. Survey of education in Western world from ancient Judaic schools to major contemporary developments. Emphasis on institutional developments and cultural events which accompanied them.
Stevens; D.

501 History of Education in the United States (4)
Prereq: perm. Survey of educational developments from colonial America to present. Readings include both primary and secondary sources. Emphasis on institutional developments and cultural events which accompany them.
Stevens; F; Y.

502 Evolution of Educational Thought (4)
Prereq: perm. Study of selected educational theorists and cultural assumptions which influenced their ideas. Where available, readings are from primary sources.
Stevens; F; Y.

503 Philosophies of Education (4)
Prereq: perm. Survey of European and American educational theorists and movements from a philosophic perspective. Contemporary educational thought in U.S. emphasized.
Stevens, Wood; W, Su; Y.

504 Social Structure and Change in Education (4)
Prereq: perm. Studies in interaction of social structure and educational reform. Concepts of class, status, bureaucracy, technocracy, and cultural pluralism assessed in their relationships to sociology of knowledge and educational alternatives.
Stevens, Wood; Sp; Y.

505 Comparative Cultures and Education (4)
Studies in learning as a social process with emphasis on the nonwestern experience. Introduction to techniques of comparative analysis and ethnographic examination of learning systems.
Howard; F; Y.

506A Education and Development in Africa (4)
Prereq. perm. Interdisciplinary course focusing on the role of learning systems in changing African societies. Historical and ethnographic studies of pre-colonial, colonial, and post-independence African education. Education and training as tools for contemporary change and socio-economic development.
Howard; F.

507 Programs in International Education (3)
Prereq: perm. Assistance programs to education in developing nations; foundation programs, UNESCO programs, A.I.D. programs. Assistance programs of other nations. Objectives, structures, funding, organization, and plans for implementation.
Staff; D.

508 Poverty, Education, and International Development (4)
Interdisciplinary course focusing on poverty in African, Asian, and Latin American societies and the uses of education, including nonformal education, adult education, and literacy programs, to promote rural development. Problems in planning and implementation. Social impact of intervention.
Howard; W; Y.

509 Political Philosophies of Citizenship Education (4)
Use of popular literature and documentary evidence to critically examine citizenship education as seen by liberals, conservatives, and socialists. Focus on relationships among social/political crises, citizenship philosophy, and issues in education.
Wood; Y.

510 Principles of Curriculum (4)
Major curricular movements, principles of curriculum development, forces affecting what is taught, curriculum evaluation, and recent trends.
Johnson; F, Su; Y.

511 Developing a Thinking Skills Program for the Elementary/Secondary Classroom (4)
Examines current research and theory about the teaching of thinking skills. Emphasis on the integration of theory, research, and classroom instruction.
Hillkirk; D.

514 The Kindergarten Curriculum and the Kindergarten Child (6)
Provides students with opportunity to develop understanding of kindergarten child and curriculum. Focus is on helping students develop personal teaching philosophy based on current theory, research, and practice. Assists students in developing teaching techniques and teaching materials for kindergarten children.
McMath; Su; Y.

515 Basic Classification and Cataloging (5)
Prereq: admission to grad study. Prepares prospective media specialists for classification and cataloging of both print and nonprint materials with practice in preparation of card catalog such as would be encountered in elementary and secondary school library/media center. Research paper required.
Roberts; F.

516 The Use of Library Resources II (3)
Trains prospective media specialists in effective use of modern library reference sources, including indexes, bibliographies, dictionaries, yearbooks, with emphasis on subject fields such as art and music, economics, history, geography, education, library, literature, psychology, philosophy, religion, science and technology. Research paper required.
Roberts; W.

520 Foundations of Reading Instruction—Elementary (5)
Prereq: EDRE 501. Current programs, materials, and practices in reading instruction; developmental concept, emphasizing optimum realization of pupil potential, and use of reading in total school curriculum.
Rebottini, W. Smith, Staff; W, Su; Y.

521 Foundation of Language Instruction (5)
Prereq: EDRE 501. Current programs, materials, and instructional practices in language-arts curriculum. Treatment of both impression and expression aspects of oral and written communication, identification and individual investigation of problem areas.
Rebottini, W. Smith, Staff; F; Y.

522 Diagnosis: Reading/Language (5-15)
Prereq: 520 or 526. Correlation of variability in reading proficiency with incidence of retardation and disability. Exploration of causes of failure and concept of multiple causation. Review of specialized materials and instructional efforts. Systematic observation of cases of reading disabilities and preparation of case report.
Rebottini; F, Su; Y.

523 Reading/Language: Laboratory (5-15)
Prereq: 522. Application of developmental approach to problem cases in reading instruction, participation in diagnostic examination, parent and teacher conferences, individual procedures in tutoring, staffing of cases, and preparation of reports. (Weekly group discussion period, lab sessions arranged.)
Rebottini; Sp; Y.

524 Literature for Children and Adolescents (5)

Seminar in critical analysis of research and theory related to children's and adolescent literature. Opportunity to study individual problems.

McMath; Sp; Y.

526 Secondary Reading Instruction (5)

Materials, methods, and techniques of secondary reading instruction for teaching adolescent learners of various abilities. Emphasis on diagnosis of reading difficulties and adaptation of materials and teaching methods for content area instruction.

Blake-Stalker; W; Y.

528 Library Service to Children and Young Adults (4)

Study of various aspects of library/media work with children and young adults through films, texts, articles, and small and large group discussions. Class participants will study trends in library services, including effects of television, outreach programs for special child. Major emphasis on selection policies of library/media materials.

Roberts; Sp; D.

530 Problems and Practices in Modern Elementary Mathematics—Practicum (4)

Prereq: EDRE 501, perm. Modern elementary mathematics curriculum with emphasis on why changes are occurring. Nature of changes as reflected from experimental programs; effect on teaching methods. Implementation of these changes in the classroom.

Beach, C. Smith; F; Y.

532 Microcomputer Applications in Education (4)

Introduction to uses of microcomputers in education. Emphasis in evaluating hardware and software, exploring educational applications, and developing introductory program-writing skills.

Flemister; F, W, Sp; Y.

540 New Programs and Practices in Elementary Science—Practicum (4)

Prereq: EDRE 501, perm. New programs and trends in science teaching identified and evaluated. Philosophy, content, and grade level placement of topics in federal, foundation, and privately sponsored experimental programs in elementary science identified. Practice in using materials proposed by those various groups and in applying metric education, simulations, games, etc.

Martin; F; Y.

541 New Topics in Science and Science Education for Elementary School Teachers (4)

Prereq: perm and teaching experience. Modern advances in science and current topics to determine suitable content, apparatus, and grade placement for presentation in elementary schools. Development and use of curriculum guides, modern units, outdoor education, science fairs, field trips, programmed materials, and similar methods of advancing science education required.

Martin, Skinner; D.

542 Seminar in Science Education (3)

Prereq: bachelor's degree and perm. Provides elementary and secondary school teachers with a variety of techniques which enable them to integrate new concepts of science education into their teaching, such as environmental education, population education, energy conservation, world hunger, food problems, outdoor biology, etc.

Martin, Mitias, Skinner; D.

550 Teaching Strategies for Cultural and International Understanding (4)

Prereq: EDRE 501, perm. Psychological and sociological foundations of cultural values and ways of life investigated. Strategies for developing cross-cultural understanding and cooperation studied and developed. Emphasis upon innovative approaches to learning for elementary and secondary school pupils. Practicum provided.

Staff; D.

551 Programs and Practices in Elementary Social Studies—Practicum (4)

Prereq: EDRE 501, perm. Trends in modern social studies curriculum.

Leep; D.

560 Advanced Studies of Children (4)

Prereq: 20 hrs of education and/or psychology. Intensive study of research in child development from conception to maturity and implications for educational practices.

McMath; W, Su; Y.

561 Introduction to Individualization of Education (4)

Each participant will develop knowledge of major concepts for individualization of education and demonstrate this knowledge through creation of an instructional package designed for a classroom setting. Study of major components necessary for teacher to implement individualized instruction in classroom.

Johnson; Sp; Y.

565 Introduction to Teaching the Talented and Gifted (4)

Provides introduction to rationale, scope, and nature of concerns relative to education of gifted youth. Attention to overview of problems and issues including (1) societal factors that influence programs, (2) characteristics and identification of gifted youths, and (3) current and recommended programs.

Leep; Su.

566 Strategies for Teaching Talented and Gifted (4)

Provides regular classroom teachers with background to prepare materials and conduct activities suitable for challenging gifted students in their regular classrooms. Various programs appropriate for gifted students explored.

Skinner; W.

570 Nature and Needs of Persons with Exceptionalities (5)

Introductory course in special education at graduate level. Major objective to provide comprehensive understanding of characteristics and service needs of exceptional individuals of all ages with emphasis on current issues and trends in special education.

Staff; F; Y.

570A Curriculum and Instructional Materials for Persons with Handicaps (3)

Prereq: 6 hrs in special education. Philosophy, principles, content, organization, and methods needed to analyze, design, and develop comprehensive curriculum plans, instructional programs, and appropriate materials to teach retarded individuals of all ages and levels.

Jageman; F; Y.

570B Language Development and Adaptation for Persons with Handicaps (3)

Prereq: 6 hrs in special education. In-depth methods and materials of language arts instruction with mentally retarded. Includes 15 clock hrs of directed lab experience, tutoring mentally retarded child, adolescent, or adult.

Staff; F; Y.

570C Methods for Teaching Persons with Developmental Handicaps (3)

Prereq: 6 hrs in special education. Detailed study of instruction in social studies and science, including development of teaching unit for mentally retarded and consideration of these content areas for the retarded in mainstream. Includes 15 clock hrs of directed experience, teaching science or social studies to group of retarded children or adolescents in school setting.

Sparks; W; Y.

570D Mathematics for Persons with Handicaps (2)

Prereq: 6 hrs in special education. Mathematics instruction with mildly and moderately mentally retarded children, emphasizing content, methods, materials, and activities for functional life skills.

Jageman; W; Y.

570E Career and Vocational Education for Persons with Handicaps (3)

Prereq: 6 hrs in special education. Provides overview of career and vocational options for handicapped persons of all ages. Defines role of special education and regular education personnel in providing career and vocational guidance, training, placement, and follow-up services to promote career and life adjustment of handicapped persons. Delineates opportunities for handicapped persons.

Yanok; Sp; Y.

571 Problems in Education: Developmental Handicaps (2-9)

Prereq: 6 hrs in special education and perm. Critical evaluation of selected current problems confronting teacher, consultant, specialist, or administrator concerned with education of mentally retarded children and youth.

Jageman, Sparks; F, W, Sp; Y.

572 Diagnosis and Evaluation of Persons with Handicaps (4)

Prereq: 6 hrs in special education. Formal and informal methods of assessment, screening, and classification; collection and appropriate application of clinical data; formulation of prescriptive educational plans for handicapped children and youth using laboratory experience and multidisciplinary consultations.

Staff; F; Y.

573 Nature and Needs of Persons with Multiple Handicaps (4)
Analyses of etiologies, characteristics, and diagnosis of multiple handicaps (including moderate, severe, profound mental retardation, orthopedic and sensory impairments, medical and behavioral disabilities), and the theoretical and therapeutic implications for transdisciplinary coordination of life span planning.
Roth; W; Y.

574 Nature and Needs of Persons with Specific Learning Disabilities (4)
Prereq: 6 hrs in special education. Overview of field of learning disabilities, including definition, evaluation, and placement. Also covers causes, characteristics (i.e., disabilities of cognition, perception on reading, mathematics, language, attention), educational approaches, and current issues.
Safran; F.

575 Methods for Teaching Persons with Multihandicaps (4)
Focuses on the design and implementation of multifactored/transdisciplinary/ecological assessments, curricular adoption/development, planning processes, instructional strategies, adaptive materials and equipment, evaluation and methods of structuring and arranging environments.

576 Administration and Organization of Special Education(4)
Prereq: 6 hrs in special education. Historical perspective, diagnostic procedures, legislative provisions, research implications, community and professional resources, current issues, and general organization and management of special education programs. Applied field experiences on both group and individual basis.
Staff; Sp; A.

577 Education and Counseling of Parents of the Handicapped (4)
Prereq: 6 hrs in special education. Development of skills required to set up parent education programs with emphasis on the educational aspect; interpreting problems of handicapped child to parents.
Staff; W; Y.

578 Early Childhood Special Education (4)
Prereq: 6 hrs in special education. Purpose, organization, and methods of early childhood education of the handicapped. Planning, guiding, supervising, and evaluating growth and behavior of young handicapped children.
Sparks; Sp; Y.

580 Homemaking and Family Living for Persons with Handicaps (3)
Prereq: 6 hrs in special education. Identification of resources; development and application of curriculum, methods, and materials for teaching home and family living skills to handicapped children and adults in schools, residential facilities, or workshops.
Jageman; W; A.

581 Medical Aspects of Persons with Handicaps (2)
Prereq: 6 hrs in special education. Development of medical terminology and understanding of effect of medical conditions on conditions of learning. Emphasis on biochemical, convulsive, and neurological disorders.
Jageman; W; Y.

582 Methods for Teaching Persons with Specific Learning Disabilities (4)
Prereq: 574 and 6 hrs in special education. Methods of identifying children's academic and behavioral problems, and implementing effective remedial procedures.
Staff; Sp; Y.

583 Nature and Needs of Persons with Severe Behavior Handicaps (4)
Prereq: 6 hrs in special education. Introductory study focusing on characteristics of emotionally disturbed/severe behavior handicapped children/youth. Specific topics include conceptual models of disturbance, classification, evaluation and placement, specific characteristics (i.e., aggression, withdrawal, hyperactivity, juvenile delinquency), and implications for educational and psychological intervention.
Safran; W.

584 Methods of Teaching Persons with Severe Behavior Handicaps (4)
Prereq: 583 and 6 hrs in special education. Specific methods of teaching emotionally disturbed/severe behavior handicapped children/youth. Different intervention techniques are covered including affective education, cognitive behavior modification, applied behavior analysis developmental therapy, behavioral consultation, and crisis intervention.
Safran; Sp.

585 Behavior Management of Persons with Handicaps (3)
Theories, research, and application of principles of behavior management models including development, design, data collection, self control techniques, generalization, and maintenance of social and academic individual and group programs.
Roth; W; Y.

589 Problems in Learning Disabilities (2-9)
Prereq: 6 hrs in special education and perm. Critical evaluation of selected problems in area of learning disabilities.
Staff; F, W, Sp, Su; Y.

592 Workshop in Curriculum and Instruction (1-15)
Prereq: perm (max of 8 hrs may be counted toward requirements of a Master of Education degree). Designed to provide practicing teachers and other instructional personnel with short courses, workshops, and summer institutes directed toward their identified needs. Following are areas of concentration currently available.

A Language Arts
B. Social Studies
C. Science
D. Mathematics
E. Reading
F. Kindergarten
G. Individualizing Instruction
H. Team Teaching
I. Interaction Analysis
J. Developing Behavioral Objectives
K. Curriculum Development
L. Interdisciplinary Topics
M. Special Topics
N. Special Education Topics
O. Supervision of Instruction

Staff; D.

596 Introduction to Educational Media (4)
Principles of instructional materials and media applied to teacher-student communication. Basic experiences in production of instructional materials and equipment operation. Research paper required. Lab.
McCutcheon; F, W, Sp, Su; Y.

597 Production of Instructional Materials (4)
Prereq: 596 or EDM 480. Use and preparation of locally produced, inexpensive instructional materials. Lab experience in use of pictures; lettering; coloring; preservation; and reproduction techniques for pictures, slides, transparencies, etc. Final project required.
Staff; W; Y.

605 Individual Studies in Comparative Education (2-6)
Prereq: perm. Studies in an area of national development.
Howard; D.

606 Seminar in Comparative Education
Prereq: perm. Topical interdisciplinary seminar focusing on variable themes. Possible topics include, "Women, Education, and Development," "Third World Children and Youth," etc.
Howard; Sp.

610 Elementary School Curriculum (5)
Prereq: EDRE 501. Curriculum as a basic educational concern; issues involved in selecting and organizing content; systematic study of curriculum development in elementary school.
Leep; Sp, Su; Y.

611 Supervision of Instruction (4)
Introduction to basic concepts and theories of instructional supervision. Emphasis on the roles, tasks, and processes involved in supervisory practice based on theory and research in education and ancillary fields such as psychology, sociology, philosophy, organizational management, communications, and change agentry.
Hillkirk, Thompson; F; Y.

612 Middle School Curriculum (4)
Prereq: 510. Concentrates specifically on early adolescent age. Special emphasis on unique purposes and concepts of jr high/middle school curriculum and its role in providing articulation between elementary school and sr high school.
Johnson; W; Y.

613 High School Curriculum (4)
Prereq: 510. Study of high school curriculum including emphasis on sources of curriculum and major curriculum movements, study of current issues and program alternatives, and development and evaluation of high school curriculum.
Thompson; Su; Y.

614 Analysis of Supervisory Systems (4)
Critical analysis of models of instructional supervision with emphasis on the role and vision of instructional leadership and professional development in the conceptualizing, planning, and implementing supervisory systems.
Hillkirk, Thompson; W; Y.

618 Supervision of Special Education (4)
Prereq: 611 and 6 hrs of special education or perm. Emphasizes leadership skills, principles, practices, and programs leading to improved education for handicapped children and professional growth for teachers in special education. These skills encompass all areas of exceptionality and include the competencies for evaluating full-time programs, part-time programs, and supportive services to children in the mainstream of education as these relate to each of the several handicapping conditions. Laboratory experiences arranged on an individual basis.
Staff; Sp; A.

635 Advanced Classification and Cataloging (4)
Prereq: 515 or perm. Problems of classifying by Dewey; corporate entry; Library of Congress classification and subject headings; serials. Introduction to other classification systems, divided and classified catalogs, administration of catalog departments; consideration of current issues. Lab work involved.
Roberts; D.

636 Media and the Young Adult (4)
Theoretical approach to young adult programming and services; analyzing general characteristics of young adults, their information needs, institutional services and operational factors, materials and media, information-seeking behavior, media use, and impact of media.
Roberts; Sp.

637 Library Media Automation (3)
Covers computer applications to library functions; instruction; management of instruction; instructional software evaluation; and instructional software design technique.
Flemister; W.

660 Advanced Principles of Teaching (4)
Critical appraisal of research in areas of learning and teaching. Study of instructional models as applied to classroom teaching and learning.
Martin, Mitias; W, Su; Y.

666 Characteristics of the Gifted and Their Assessment (4)
In-depth study of characteristics of gifted as revealed through empirical/experimental research and literature. An examination/analysis/identification of cognitive, social, emotional, and personal qualities most dominant among gifted, as well as concomitant problems. Attention to processes and tools of assessment of characteristics as well as to multiple variables (economic, social, cultural, etc.) which relate to these characteristics.
Mitias; Sp; Y.

668 Practicum in Teaching Gifted and Talented Students (3-6)
Prereq: 8 hrs in gifted education. Field experience includes applications of the principles of identification, grouping, and curriculum planning to the needs of gifted students in a school setting. The development of the planned activity will be supervised by faculty from the School of Curriculum and Instruction in cooperation with a TAG coordinator and/or appropriate school personnel.
Leep, Mitias, Skinner; F, W, Sp; D.

670 Practicum in Developmentally Handicapped (2-6)
Prereq: 6 hrs in special education and perm. Working directly with mental retardation classes or with individual children or adults to identify problems and develop and implement a prescriptive educational plan.
Staff; F, W, Sp; Y.

671 Practicum in Severe Behavior Handicapped (2-6)
Prereq: 6 hrs in special education and perm. Individual experiences selected to prepare personnel for classroom, consultant, or supervisory positions.
Staff; F, W, Sp; Y.

672 Practicum in Administration of Special Education (2-6)
Prereq: 6 hrs in special education and perm. Directed administrative experiences in educational programs for handicapped in public schools. Recommend that this follow or be taken concurrently with EDCI 576.
Staff.

673 Practicum in Learning Disabilities (2-6)
Prereq: perm and 6 hrs in special education. Working directly with learning disabilities classes or with individual children to identify problems and develop effective teaching strategies.
Staff; F, W, Sp; Y.

674 Practicum in Supervision of Special Education (2-6)
Prereq: perm and 6 hrs in special education. Directed experiences with special education supervisors in public schools. Recommend that this follow or be taken concurrently with EDCI 618.
Staff.

675 Practicum in (MH) or (MH/EC) Multiple Handicapped/ Early Childhood Education (2-6)
Prereq: perm. Individual experiences working directly with multiple handicapped children in different age groups. Deals with assessment, implementation, and evaluation of effective teaching strategies.
Staff; D.

690 Research in Education (2-6)
Prereq: perm. Individualized research project.
Staff; F, W, Sp, Su; Y.

691 Seminar in Education (4)
Prereq: 35 hrs or perm. Nonthesis option, major paper required.
Staff; Sp, Su; Y.

695 Thesis (2-10)
Prereq: perm.
Staff; F, W, Sp, Su; Y.

696 Organization and Administration of Educational Media Programs (5)
Prereq: 515, 516, 528, 596, 597, 698, perm. Duties of university and public school media directors; budgeting, training of personnel, handling and classifying materials, management, and evaluation programs. Research paper required.
Staff Sp; Y.

697 Analysis of Media Theory, Research and Instructional Design Model Nomenclature (3)
Prereq: EDRE 501 or perm. Review, analysis, and criticism of research in educational media, with interpretation and application of research findings of primary concern. Suggestions for future research in educational media, sequencing of instruction in relation to hierarchies of competence, and design of multi-media instruction explored.
Staff; D.

698 Industrial Systems Technology (4)
Systematic procedures for the design, implementation, and evaluation of instruction.
McCutcheon; Sp; A.

699 Practicum in Educational Media (3-9)
Prereq: perm (perm must be obtained 1 qtr previous to enrolling in 699). Course participants evaluate a number of media centers for several university media areas. Participants required to prepare written reports on center evaluations.
Roberts; D.

700 Advanced Foundations of Education (4)
Prereq: perm. Seminar for selected interdisciplinary studies in social, cultural, and philosophic foundations of education.
Stevens, Wood; F, Sp.

706 Advanced Seminar in Comparative Education (5)
Prereq: perm. Emphasis on interdisciplinary treatment of problems and concerns. Contemporary situations investigated. Techniques for comparative study of educational systems and developments.
Howard.

709 Internship in Comparative Education—United States or Abroad (10-15)
Prereq: perm. One-year assignment with stateside operation (such as aiding or assisting in comparative education program) or assignment abroad. Interns required to have had experience in teaching in the U.S.
Staff; D.

715 Theories of Curriculum Change (5)
Prereq: 660 or perm. Major curriculum models and their underlying theory. Critical reading and interpretation of research related to curriculum change and effectiveness. Applications of theory and research in new models.
Thompson; F; Y.

716 Theories of Instructional Design and Evaluation (5)
Prereq: 660, 715. Theories and models of instruction, their

psychological and philosophical basis; construction of models of instructional design, and their evaluation to effect desired learning outcomes.
Mitias. Staff; W; Y.

719 Curriculum and Instruction Practicum (6)
Prereq: 715, 716, 717. Supervised experiences in analysis and application of theories and techniques of curriculum change and instructional change in school setting.
Staff; D.

720 Foundations of Elementary Reading Instructions (5)
Critical evaluation of literature and recent research on objectives, content, and methodology. History of instruction, current problems and issues, recent trends and emphasis in teaching practices. Impact of dominant theories of learning and philosophies of education. Research design and methodology in scientific investigations.
Rebottini; W; Y.

721 Foundations of Language Instruction (5)
Prereq: perm. Critical evaluation of literature and recent research on objectives, content, and methodology. History of instruction, current problems and issues, recent trends and emphases in teaching practices, impact of dominant theories of learning and philosophies of education. Research design and methodology in scientific investigations.
Rebottini. Staff; F; Y.

722 Diagnosis: Reading/Language (5-15)
Prereq: 720 or 726. Correlation of variability in reading proficiency with incidence of retardation and disability. Exploration of causes of failure and concept of multiple causation. Review of specialized materials and instructional efforts. Systematic observation of cases of reading disabilities and preparation of case report.
Rebottini; F; Y.

723 Laboratory Reading/Language (5-15)
Prereq: 722. Application of developmental approach to problem cases in reading instruction; participation in diagnostic examination, parent and teacher conferences, individual procedures in tutoring, staffing of cases, and preparation of reports. (Weekly group discussion period, lab sessions arranged.)
Rebottini; Sp; Y.

724 Literature for Children and Adolescents (5)
Seminar in critical analysis of research and theory related to children's and adolescent literature. Opportunity to study individual problems.
McMath; D.

726 Secondary Reading Instruction (5)
Materials, methods, and techniques of secondary reading instruction for teaching adolescent learners of various abilities. Emphasis on diagnosis of reading difficulties and adaptation of materials and teaching methods for content area instruction.
Blake-Stalker; W; Y.

730 Curriculum in Elementary Education—Mathematics (4)
Prereq: perm. Critical evaluation of literature and recent research on objectives, content, and methodology. History of instruction, current problems and issues, recent trends and emphases in teaching practices. Impact of dominant theories of learning and philosophies of education.
Beach. C. Smith; D.

740 Curriculum in Elementary Science Education (4)
Prereq: teaching experience. History of science instruction, curriculum problems, issues, recent trends and emphases in teaching practices. Impact of dominant theories of learning and philosophies of education on current curriculum changes in elementary school science. Critical review of existing conventional programs used as a background for examining experimental programs. Emphasis on historical development of science education from dominance of nature study and aesthetics to modern experimental programs.
Martin. Skinner; D.

750 Inquiry and Value Clarification in Social Studies (4)
Prereq: 550 or 551. Critical discussion of application of inquiry and value clarification models in teaching of social studies.
Leep; D.

760 Readings and Research in Human Development (3-5)
Interpretation of scientific literature on human development as related to classroom experience in preschool through adolescence. Independent projects and solving selected educational problems.
McMath; D.

790 Advanced Seminar in Education—Research (4)
Prereq: perm. Review of current literature and research in education. Preparation of research proposal.
Staff; D.

800 Advanced Dynamics of Human Learning (5)
Prereq: master's degree or perm. Study and critique of major theories of learning and human development; analysis of present and future social and cultural changes and their potential impact on human learning and development.
Mitias; F; Y.

801 The School as a Dynamic Social Institution (5)
Prereq: master's degree, 800 or equiv. School as changing social system; changing philosophies, functions, and cultural styles of school. Politics, control, and conflict resolution in school.
Stevens; W; Y.

802 The Curriculum Worker as a Change Agent (5)
Prereq: master's degree, 800, 801, or equiv. Analytical study of theories, concepts, and strategies of change, and roles of change agents as related to educational institutions and programs. Case studies and field experiences related to change are examined with emphasis on planning, analysis, and evaluation.
Staff; Sp; Y.

810 Seminar in the Supervision of Instruction (5)
Prereq: 614. Critical analysis and discussion of theory, research, major issues, and trends in field of educational supervision and application of findings to supervisory practices and programs.
Staff; D.

820 Research and Curriculum in Elementary Education Reading (4)
Prereq: perm. Critical evaluation of literature and recent research on objectives, content, and methodology. History of instruction, current problems and issues, recent trends and emphasis in teaching practices. Impact of dominant theories of learning and philosophies of education. Research design and methodology in scientific investigations.
Staff; D.

821 Field Experience: Reading (5-15)
Prereq: 720 or 726. Supervised field experiences in reading.
Staff; D.

822 Field Experience: Language (5-15)
Prereq: 721. Supervised field experience in language.
Staff; D.

823 Independent Study: Reading (5-15)
Prereq: 720 or 726. Independent study with topic restricted to some aspect/level of reading instruction.
Staff; D.

824 Independent Study: Language (5-15)
Prereq: 721. Independent study with topic restricted to some aspect/level of language instruction.
Staff; D.

827 Practicum in Secondary Education—English (5)
Prereq: perm. In-depth study of school system and its English curriculum with critique by faculty and report by student, using available research.
Staff; D.

828 Practicum in Secondary Education—Modern Foreign Languages (5)
Prereq: perm. In-depth study of school system and its modern foreign language curriculum with critique by faculty and report by student, using available research.
Staff; D.

830 Research in Elementary Education—Mathematics (4)
Prereq: perm. Research design and methodology in scientifc investigations.
Staff; D.

840 Research in Science Education (4)
Prereq: perm. Critical evaluation of recent research on objectives, content, and methodology in science education. Research design and methodology of these investigations studied in detail. Review of microfilm research studies and abstracts made to identify areas and problems requiring further research.
Martin; D.

841 Practicum in Science Education (5)
Prereq: perm. In-depth study of theory and foundations of science curricula and instructional practices within given school system; analysis of research as it applies to science education in schools.
Martin, Mitias, Skinner; D.

850 Seminar in Social Studies Education: Curriculum in Social Studies (3)
Prereq: 8 hrs grad work in social studies education. Post-master's analysis of social, curricular, and instructional theories of various contemporary schools of thought in social studies.
Leep; D.

851 Seminar in Social Studies Education: Program Analysis (3)
Prereq: 850. In-depth analysis of school system and its social studies curriculum.
Leep; W; D.

852 Seminar in Social Studies Education Research (3)
Prereq: 851. Identification of reasonable researchable problems in social studies and development of appropriate research design.
Staff; Sp; D.

890 Research in Education (2-12)
Prereq: admission to advanced standing.
Staff; F, W, Sp, Su; Y.

895 Dissertation (2-15)
Prereq: perm.
Staff; F,W, Sp, Su; Y.

• *Economic Education*

The M.A. in economic education at Ohio University is administered by the faculty of the School of Curriculum and Instruction in the College of Education. It is designed specifically for in-service teachers who have baccalaureate degrees and who meet the normal graduate admission standards and the standards of the School of Curriculum and Instruction. A program of 48 quarter hours in economic education, economics, and educational theory and research is required. Degree candidates are expected to take a minimum of 28 quarter hours in economic education, 12 in economics, and eight in education. The total program must be planned with and approved by the graduate advisor.

The Ph.D. is also offered through several programs in the School of Curriculum and Instruction, College of Education. These are described elsewhere in this catalog, under the heading Education.

546 Economics in the Curriculum (3-5)
For teachers and other qualified graduate students, designed to provide study of (1) fundamental economic concepts, (2) methods of inquiry employed by economists, and (3) relationship of economics content to classroom instruction and materials.
Rader; D.

547 Economic Analysis and Its Application to the Curriculum (2-5)
For elementary and secondary teachers, designed to emphasize methods of inquiry employed by economists and their application to theories of instruction.
Rader; D.

548 Economic Policy and Its Application to the Curriculum (2-5)
For elementary and secondary teachers, designed to provide application of an economic analysis to economic policy and courses of study.
Rader; D.

649 Economic Education Programs (3-5)
Prereq: perm. Economic education in the schools; administrative and organizational structures, current curriculum development projects, essential economic understandings that should be taught and their place in the curriculum, ways to improve economic education and economic education organizations.
Rader; D.

651 Master's Seminar (2-5)
Prereq: perm. Writing of colloquium papers in areas of economic education.
Rader; D.

691 Economic Education Seminar (2-5)
Prereq: perm. Selected topics of current interest.
Rader; D.

692 Economic Education Research (3-5)
Prereq: perm. Methodology, analysis of data, and preparation of research findings. Precedes writing of colloquium paper.
Rader; D.

693 Readings in Economic Education (1-15)
Prereq: perm. Readings on topics selected by student in consultation with a faculty member.
Staff; F, W, Sp, Su; Y.

695 Thesis (1-15)
Prereq: perm (as recommended by faculty advisor and thesis committee).
Staff; F, W, Sp, Su; Y.

697 Independent Research in Economic Education (1-15)
Prereq: perm. Research in selected fields of economic education under direction of faculty member.
Staff; F, W, Sp, Su; Y.

698 Internship (1-15)
Prereq: perm (as recommended).
Staff; F, W, Sp, Su; D.

791 Economic Education Seminar (3-5)
Prereq: perm. Selected topics of current interest.
Staff; D.

792 Economic Education Research (3-5)
Prereq: perm. Methodology, analysis of data, and preparation of research findings.
Staff; F, W, Sp; D.

▼ Professional Laboratory Experiences

Professional laboratory experiences for graduate students are designed for the individual student by the director of field experience in conference with the student's graduate advisor. The experience is planned as a meaningful extension of the student's prior experience as a teacher, counselor, or administrator. In general, undergraduate student teaching is a prerequisite for all graduate level laboratory experiences.

560 Internship in Education (3-9)
Prereq: 9 qtr hrs grad work in education and perm of director of field experience and student's graduate advisor. Teaching certificate and experience for interns in administration and supervision. Internship in school administration, supervision of instruction or classroom teaching for minimum of 1 qtr, full-time. Following brief period of orientation to school and community, student assumes increasing responsibility under direct supervision of staff member of school system. Student expected to function as classroom teacher with regular supervision, as team member in team-teaching situation, or as assistant to administrator or supervisor. Weekly seminar conducted by college staff and public school associates.
Staff; F, W, Sp, Su; Y.

561 Internship in Education (3-9)
Prereq: 9 qtr hrs graduate work in education and perm of director of field experience and student's graduate advisor. Continuation of 560. See 560 for description.
Staff; F, W, Sp; Y.

570 Supervision of Student Teaching (3-9)
Prereq: teaching certificate and experience. Principles and techniques in supervision of student teaching and other professional laboratory experiences. Designed primarily to prepare public school teachers and college instructors for more effective supervision.
Staff; D.

690 Professional Laboratory Studies (3-9)
Special studies based upon direct experience in supervision of student teachers in campus or public school laboratories.
Staff; D.

760 Internship in Education (3-9)
Prereq: 9 qtr hrs graduate work in education, perm of director of field experience and student's graduate advisor. Teaching certificate and experience for interns in administration and supervision. Internship in school administration, supervision of instruction, or classroom teaching for minimum of one qtr, full-time. Following brief period of orientation to school and community, student assumes increasing responsibility under direct supervision of staff member of school system. Student expected to function as classroom teacher with regular supervision, as team member in team-teaching situation, or as assistant to administrator or supervisor. Weekly seminar conducted by college staff and public school associates.
Staff; F, W, Sp, Su; Y.

761 Internship in Education (3-9)
Prereq: 9 qtr hrs graduate work in education, perm of director of field experience and student's graduate advisor. Continuation of 760. See 760 for description.
Staff; F, W, Sp; Y.

790 Professional Laboratory Studies (3-9)
Special studies based upon direct experience in supervision of student teachers in campus or public school laboratories.
Staff; D.

■ ENGINEERING AND TECHNOLOGY

- Chemical
- Civil
- Electrical
- Industrial and Systems
- Integrated
- Mechanical

Programs of graduate study may be formulated with majors in chemical, civil, electrical, industrial and systems, or mechanical engineering. An interdisciplinary Ph.D. program is available with specialty areas in materials processing; geotechnical and environmental; and intelligent systems. The M.S. degree is offered in all the engineering departments, and the Ph.D. can be earned in chemical engineering, electrical engineering, and in interdisciplinary areas in materials processing, geotechnical and environmental, and intelligent systems.

The standard four-year course in engineering or its equivalent, as offered in institutions approved by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. (formerly Engineers Council for Professional Development), is a general prerequisite for graduate study. Graduates in science and other fields of engineering, whose programs have included sufficient courses in mathematics, physics, chemistry, the humanities, and the social sciences, may be accepted as graduate students, though such students must take undergraduate basic engineering courses as required. For each graduate program, the GRE also is required, except in extenuating circumstances. Applicants should refer to the individual departmental sections for specific information.

Graduate programs and advanced research have been enhanced by private endowments totaling over $15 million (principally due to the late Dr. Paul C. Stocker, a distinguished alumnus, and his wife, Beth K. Stocker). These endowments provide fellowships and associateships ranging from $12,000 to $18,000, plus tuition (excluding the general fee). Other teaching and research associateships also are available. For more information on these resources, contact the specific department.

• Chemical Engineering

Programs leading to M.S. and Ph.D. degrees are offered with research emphasis particularly in the areas of coal conversion and utilization, polymerization reaction engineering, process control and dynamics, biochemical engineering, corrosion, environmental assessment, materials, and separation processes. Interdisciplinary efforts are also occurring in some areas.

The basic requirement for admission to an M.S. program in the department is a B.S. degree in chemical engineering. Special programs of study leading to the M.S. in chemical engineering are possible for students who have received bachelor's degrees in other scientific or engineering fields. These special programs require completion of some portion of undergraduate chemical engineering courses. Inquiries are invited.

An M.S. degree in chemical engineering or an appropriate related area is required for candidacy in the Ph.D. program. Students working toward the M.S. are expected to take a minimum of 30 credit hours of graded coursework. The following courses must be included in the chemical engineering area: 600, 601, 604, and 642. Students also must complete a thesis requiring a minimum of 30 credit hours of work. All graduate students must maintain a minimum g.p.a. of 3.00 overall and in departmental courses.

A nonthesis option is available for students having proven research competence. This program requires a minimum of 45 credit hours of graded coursework. A special topic investigation extending over two or more quarters is required of all nonthesis participants. The special project must require a minimum of 15 credit hours of work.

Students are encouraged to take coursework outside the department in other engineering disciplines and in related areas such as mathematics, chemistry, and physics. All graduate students are expected to participate in departmental graduate seminars when offered.

A student working toward a Ph.D. program will take courses and appropriate work as required to fulfill a program of study determined by the student and the advisory committee and acceptable to the departmental graduate committee. The Ph.D. qualifying examination, normally given twice a year, is a prerequisite for unconditional admission to the doctoral program. No student will be allowed to attempt the exam more than twice. After a Ph.D. student has completed his or her coursework, that student will be required to take a comprehensive examination.

508 Engineering Experimental Design (3)
Prereq: perm. Application of engineering analysis and statistics to the design of experiments with particular emphasis on continuous processes as typically encountered in the chemical and materials areas.
Chen; F; Y.

520 Coal Conversion Technologies (3)
Prereq: perm. Coal characterization. Introduction to fixed bed, fluid bed, and entrained bed operations. Equilibrium and kinetic predictions. Coal gasification and liquefaction processes.
Chen; W; A; 1991.

530 Advanced Metallic Corrosion (3)
Prereq: perm. Review of basic principles and current theories of stress corrosion and embrittlement, corrosion fatigue, and transgranular and intergranular corrosion. Some laboratory work using recent techniques and apparatus. 4 lec.
Baloun; F; Y.

540 Process Modeling and Control (3)
Prereq: perm. Digital computer control in chemical engineering. State space concepts and its application in process control.
Chen; W; A;1990.

548 Chemical Process Safety (3)
Prereq: perm. Safety and loss prevention of chemical processes. Hazards, hazard analysis, operability studies. Use of alarms, trips, and interlocks.
Jepson; Sp; Y.

550 Fundamentals of Material Analysis (3)
Prereq: perm. An overview of both classical and modern techniques of materials analysis. Topics covered range from classical optical spectroscopies (IR, FTIR, Raman, UV/VIS) to such modern surface techniques as AES, XPS, (ESCA), and RBS.
Gulino; Sp; Y.

561 Environmental Assessments (3)
Prereq: perm. Determining whether emissions to air, land, or water are likely to be dangerous to people or environment. UNAMAP computer programs developed by EPA for determining ambient ground concentrations resulting from emissions from various sources will be used. How to run risk analysis for dangerous substances.
Baasel; Sp; Y.

577 Polymer Synthesis and Properties (3)
Prereq: perm. Polymer classifications and nomenclature, reaction mechanisms, reaction kinetics, characterization techniques, reactor design and modeling, manufacturing processes, and polymer processing techniques.
Sampson; Sp; Y.

581 Biochemical Engineering (3)
Prereq: perm. Study of processes in chemical engineering that depend on biological systems. Includes fermentation technology; pharmacokinetics; enzyme kinetics and technology; macro processes such as aquaculture, biomass conversion, and wastewater treatment; and biomaterials.
Dinos; Sp; Y.

600 Applied Chemical Engineering Calculations (5)
Prereq: perm. Linear and nonlinear algebra, ordinary and partial differential equations, optimization, and regression. Extensive treatment of numerical techniques for nonlinear problems. Computer modeling.
Sampson; F; Y.

601 Advanced Chemical Engineering Thermodynamics (5)
Prereq: perm. Chemical engineering processes, pure materials, and mixtures. Criteria of equilibrium for homogeneous and heterogeneous systems. Correlation and estimation of properties; thermodynamic consistency tests.
Baloun; W; Y.

604 Chemical Reaction Engineering (5)
Homogeneous and heterogeneous kinetics, isothermal and nonisothermal reactor design, non-ideal flow, axial dispersion, mass transfer and reaction, catalysis, multiphase systems.
Sampson; W; Y.

620 Manufacturing Materials (4)
Prereq: perm. Examines interrelationship among chemical and physical structure, properties, and processability of materials. Emphasis on the effect of this interrelationship on the final properties of manufactured products.
Gulino; W; A.

632 Modern Composite Materials (4)
Prereq: perm. Survey of the different types of composite matrix and reinforcement materials. Also covered are mechanical and thermal properties and properties of strength and fracture in composites.
Gulino; W; A;1990.

642 Transport Phenomena (5)
Prereq: perm. Theoretical basis of development of heat, mass, and momentum transfer. Boundary layer theory and comparison with other theoretical and semitheoretical approaches.
Dinos; F; Y.

645 Separation Processes (4)
Prereq: perm. The description, selection, and modeling of separation processes including crystallization, leaching, extraction, distillation, absorption, filtration, membrane and diffusional processes, and fixed bed sorption. Similarities of separation processes based on models of operation are emphasized.
Prudich; F; A; 1991.

647 Computer-Aided Process Design and Simulation (4)
Prereq: perm. Use of ASPEN process flowsheet simulator to solve chemical process design problems. Non-ideal vapor-liquid equilibrium. Multicomponent separations. Processes with recycle streams.
Chen; W; A; 1991.

681 Research in Chemical Engineering (1-15)
Staff; F,W, Sp, Su; Y.

690 Special Topics in Chemical Engineering (1-6)
Advanced study in a particular field of chemical engineering.
Staff; F, W, Sp, Su; Y.

691 Seminar (1)
Special presentations by internal and external speakers.
Staff; F, W, Sp, Su; Y.

695 Thesis (1-15)
Staff; F, W, Sp, Su; Y.

700 Advanced Chemical Engineering Mathematics (3)
Prereq: 600 or perm. Advanced study in applied mathematics in chemical engineering. Restricted to small groups, with extensive student participation required.
Sampson; F; A; 1990.

702 Perturbation Methods (3)
Prereq: 600 or perm. Application of perturbation methods to fluid mechanics and heat transfer. Basic solutions using potential flow, conformal mapping, and separation of variables. Asymptotic solutions using regular and singular perturbation methods.
Chen; Sp; A; 1990.

709 Advanced Chemical Reaction Engineering (3)
Prereq: 604 or perm. Advanced study in chemical engineering reactor kinetics and design. Extensive student participation required.
Sampson; F; A; 1991.

730 Advanced Corrosion (3)
Prereq: 530 or perm. Advanced study in corrosion. Restricted to small groups with extensive student participation required.
Baloun; D.

740 Process Dynamics (3)
Prereq: 540 or perm. Advanced study in chemical engineering process dynamics. Restricted to small groups, with extensive student participation required.
Chen; D.

741 Advanced Process Control (3)
Prereq: 540 or perm. Advanced study in analog, hybrid, and digital computer control theory. Restricted to small groups, with extensive student participation required.
Chen; D.

742 Advanced Chemical Momentum Transfer (3)
Prereq: 642 or perm. An analysis of the flow of fluids and the transport of momentum and mechanical energy. The differential equations of fluid flow, potential flow, flow in porous media, flow in fixed and fluidized beds, laminar boundary layer theory, and non-Newtonian fluids.
Dinos; W; A; 1991.

743 Chemical Engineering Heat Transfer (3)
Prereq: 642, advanced or perm. Study of the theory of the transport of thermal energy in solids and fluids as well as radiative transfer. Steady and transient conduction, heat transfer to flowing fluids, evaporation, boiling and condensation, packed and fluidized bed heat transfer. Design and sizing strategies for heat exchangers used in chemical processing.
Prudich; W; A; 1990.

744 Advanced Chemical Engineering Mass Transfer (3)
Prereq: 642 or perm. Topics covered include theory of diffusion, interphase mass transfer theory, turbulent transport, mass transfer in porous media, mass transfer with chemical reaction, simultaneous mass and heat transfer, multicomponent microscopic balances.
Prudich; W; A; 1991.

889 Independent Study in Fundamental Chemical Engineering (1-6)
Intensive study in specified area.
Staff; D.

894 Research (1-15)
Doctoral level.
Staff; D.

895 Dissertation (1-15)
Staff; D.

• Civil Engineering

In civil engineering, a Master of Science degree may be earned in fluid mechanics, solid mechanics, geotechnical engineering, environmental engineering, structures, or transportation. A program leading to the Ph.D. in integrated engineering with a specialty in the geotechnical and environmental area also is offered. See Integrated Engineering listing for further information.

Applications are invited from engineering or science graduates. Collateral work to remedy deficiencies of those without civil engineering degrees may be carried out in conjunction with the M.S. program. Collateral requirements will depend upon the applicant's preparation in the major field of study. With the approval of his or her advisor, the student may elect either the thesis or the nonthesis plan (at least 33 credits of graduate coursework plus 12 credits of thesis, or 45 credits of graduate coursework including three to five credits of a special investigation, respectively).

Certain related courses offered by other departments can apply toward the major requirements. For example, various courses in mechanical engineering or mathematics can be included as part of a major in mechanics, and selected courses in chemistry or bacteriology can be considered as part of the major study in environmental engineering. Some study outside the department, but in related fields, is encouraged for all students.

A student, in consultation with an advisor, arranges his or her own program to suit personal needs and to satisfy the requirements of the Department of Civil Engineering.

The Department of Civil Engineering recommends that the student begin in the fall quarter. There are no deadlines for applications for financial aid.

500N Preparation for Graduate Studies (1-10)
Prereq: perm. Course designation to be used by graduate students needing preparation for civil engineering courses. Not for graduate credit for civil engineering majors.
Staff.

515 Photogrammetry (3)
Prereq: 210 or perm. Equipment and methods used in aerial photography and land measurement. 2 lec, 2 lab.
Kaneshige; W; Y.

520 Finite Element Methods in Engineering (3)
Prereq: perm. Background theory, formulation, and application to 1-and 2-dimensional problems and techniques for analysis. Structures, consolidation, and wave propagation.
Sargand; F; Y.

523 Continuum Mechanics (4)
Prereq: perm. Matrix methods in mechanics and structures; law of dynamics; mechanical properties of solids and fluids; basic theories of continuum mechanics. 4 lec.
Hazen; F; D.

524 Strength of Materials II (3)
Prereq: perm. Theories of failure, unsymmetrical bending, shear center, and other topics not covered thoroughly in undergraduate course. For nonmajors in civil engineering. 3 lec.
Staff; F; Y.

525 Advanced Strength of Materials (4)
Prereq: perm. Advanced treatment of theories of failure, stresses, and strains at a point, cross shear, unsymmetrical bending, curved beams, torsion, thick-walled cylinders, energy methods. 4 lec.
Staff: W: A.

526 Theory of Stability (3)
Prereq: perm. Buckling of columns, beam columns, plates, and rings. 3 lec.
Hazen: W: D.

527 Experimental Stress Analysis (3)
Prereq: 524 or 525. Elasticity theory; theory and use of mechanical, electrical, and other strain-measuring devices including photo-elastic equipment. 2 lec. 3 lab.
Hazen: Sp: Y.

528 Theory of Elasticity and Applications (3)
Prereq: perm. Equations of equilibrium and compatibility; stresses and strains in beams, curved members, thick cylinders, torsion, and structural members.
Hazen: F: D.

529 Mathematical Theory of Elasticity (3)
Prereq: 528. Fundamental equations and problems of elasticity theory; methods of stress functions and displacement potentials; finite element applications.
Hazen: W: Y.

531 Experimental Methods in Structural Dynamics (3)
Prereq: perm. Modal analysis of structural models to identify their vibration characteristics. Frequency response functions using dual-channel signal analyzers. Mobility measurement techniques. Modal parameter extraction techniques. Computer-aided structural dynamics.
Staff: W: Y: 1989.

535 Advanced Structural Theory I (3)
Prereq: perm. Analysis of indeterminate structures by both classical and modern methods. Energy theorems; method of finite differences; column analogy. 4 lec.
Staff: F: Y.

536 Advanced Structural Theory II (3)
Prereq: 535. Continuation of 535. Influence lines; effects of axial forces; shear walls; shells folded plates. 4 lec.
Staff: W: Y.

537 Advanced Structural Design (3)
Prereq: perm. Modern design concepts and principles as applied to various construction materials. 4 lec.
Staff: Sp.

538 Structural Dynamics (3)
Prereq: ME 591 and perm. Dynamic analysis of structures with multi-degree of freedom. Free and forced vibration analysis of elastic beams, frames, grids, and trusses. Earthquake and wind-induced vibration of high-rise buildings and bridges. Classical and computer methods.
Staff: F: D.

539 Computer-Aided Structural Design (3)
Analysis and design of complete structural systems using reinforced concrete, structural steel, and/or other applicable materials by using computers. Material reports and cost estimation of projects.
Steinberg: F.

540 Deterministic Approaches in Water Resources (3)
Prereq: 343 or perm. Flood routing and overland-flow theory. Parametric hydrology, linear and nonlinear analysis of rainfall-runoff systems, unit and instantaneous unit hydrograph. Conceptual models for hydrologic watershed.
Chang: W: D.

541 Stochastic Hydrology (3)
Prereq: 343 or perm. Probability distributions applicable to hydrologic events; analysis of extremes, floods and droughts; statistical associations between hydrologic variables. Analysis of hydrologic time series. Spectral and parametric formulation of stochastic models of precipitation, runoff, precipitation-runoff transfer.
Chang: Sp: D.

542 Applied Hydraulics (3)
Prereq: perm. For nonmajors in civil engineering. Flow and pressure distribution in multi-loop networks, dynamics of flow in pumps and turbines. Uniform and nonuniform flow in open channels, culvert hydraulics, hydraulic transients. 2 lec. 2 lab.
Chang: Sp: Y.

543 Open Channel Hydraulics (3)
Prereq: 342 and perm. Principles of uniform and varied flow. Channel design for uniform flow, gradually varied flow profiles, channel transitions, hydraulic jumps, flow in prismatic and nonprismatic channels. 3 lec.
Chang: F: Y.

545 Design of Hydraulic Structures (3)
Prereq: 342 and perm. Design flood peaks, flood hydrograph, spillway, penstock, and river channel regulation.
Chang: Sp: Y.

550 Solid/Hazardous Waste Management (3)
Prereq: perm. An introductory course to identify, classify, and study methods of handling, treating, and managing solid/hazardous waste.
Mitchell: F: Y.

555 Advanced Water Treatment (4)
Prereq: 450, 452, and perm. Advanced study of theory. Design of physical/chemical treatment units. Practice in control methods. 3 lec. 3 lab.
Mitchell: W: Y.

556 Advanced Waste Water Treatment (4)
Prereq: 451, 452, and perm. Advanced study of theory. Design of biological treatment units. Practice in control methods. 3 lec. 3 lab.
Kaneshige: Sp: Y.

558 Water Quality Engineering (3)
Prereq: perm. Natural and man-made characteristics of water quality, changes in quality resulting from use, criteria for control of stream pollution, methods of improving water quality, legal and economic aspects.
Staff: Sp: D.

559 Surface Water Quality Modeling (3)
Prereq: 450, 451, or perm. An advanced course on the fundamentals and principles which underlie the mathematical modeling techniques used to analyze the quality of surface waters.
Mitchell: F or Sp: Y.

562 Traffic Engineering (3)
Prereq: 361, nonmajors by perm. Vehicle and driver characteristics, uses of traffic control devices, intersection design and capacity, parking characteristics. For nonmajors in civil engineering. 2 lec. 2 lab.
Staff: W: D.

563 Traffic Parameters (4)
Prereq: perm. Vehicle-highway relationships, including vehicle performance and highway geometry; highway capacities and their influence on design.
Staff: F: Y.

564 Transportation Data Methods (4)
Prereq: perm. Introduction to traffic survey methods, data collection, evaluation. Topics include origin-destination, speed, parking, accident, and future development studies.
Staff: W: Y.

565 Traffic Regulations and Controls (4)
Prereq: 563 or perm. Typical traffic ordinances and regulations and their use in controlling traffic through use of signs, markings, control devices, traffic signals, including their use as single units or as a progressive series.
Staff: Sp: Y.

567 Traffic Studies I (1-4)
Prereq: 564. Practical problems relating to traffic surveys and data analysis.
Staff: Sp: D.

568 Traffic Studies II (1-4)
Prereq: 565 or perm. Practical problems relating to vehicular characteristics and traffic movements.
Staff: W: D.

570 Soil Engineering (4)
Prereq: perm. For nonmajors in civil engineering. Soil composition, physical and chemical properties, and classifications. Water movement and seepage problems; stress distribution, settlement, and shear strength. Applications to earth structures, retaining walls, foundations, and slope stability. 3 lec. 2 lab.
Sargand: W: Y.

572 Soil Mechanics I (3)
Prereq: perm. Water movement through soil; construction and interpretation of flow nets. Elastic equilibrium, stress distribution, compressibility and settlement of cohesive and noncohesive soil; consolidation theory. 2 lec. 2 lab.
Sargand: F: Y.

573 Soil Mechanics II (3)
Prereq: 572. Shearing strength. Plastic equilibrium, lateral soil pressures, stability of footings (bearing capacity), retaining walls, and slopes. 2 lec, 2 lab.
Sargand; W; D.

574 Advanced Soil Mechanics Laboratory (1)
Prereq: 572, 573. Advanced techniques for measurement of soil engineering properties. 3 lab.
Sargand; Sp; D.

575 Advanced Foundation Engineering (3)
Prereq: 471. Design of shallow and deep foundations for complex or unusual soil conditions; design of earth retaining structures including retaining walls, cofferdams, and sheet pile bulkheads; site improvement; performance evaluation and instrumentation.
Sargand; Sp; D.

576 Soil Stabilization (4)
Prereq: perm. Engineering, geological, and pedological soil classification systems. Mineralogy of clay minerals and claywater systems; requirements for and factors affecting soil stability. Methods and mechanisms of soil stabilization; designing and testing stabilized soils. 3 lec, 3 lab.
Staff; F; D.

582 Paving Materials and Mixtures (3)
Prereq: perm. Types, constituents, chemical behavior, tests, specifications, and uses of bituminous materials. Portland cements and aggregates in pavements. Design and manufacture of paving mixtures, and construction of pavements. 2 lec, 3 lab.
Staff; W; D.

583 Principles of Pavement Design (3)
Prereq: perm. Fundamentals of wheel loads and stresses in pavements. Properties in pavement components and design tests. Design methods and evaluation. 3 lec.
Staff; Sp; D.

584 Constitutive Equations (3)
Prereq: perm. Stress; strain, linear and non-linear theories of elastic media; stress path; introduction to plasticity.
Sargand; Sp; A.

585 Soil-Structure Interaction (3)
Prereq: perm. Beams and plates on elastic foundations, axially and laterally loaded piles; retaining walls; interface elements; construction sequences.
Sargand; W; D.

586 Theory of Plates and Shells (3)
Prereq: perm. Bending of rectangular and circular plate, small and large deflection theory, membrane and bending shell theory.
Hazen, Sargand; F; D.

588 Soil Dynamics (3)
Prereq: perm. Vibration of elementary system, wave propagation, behavior of dynamically loaded soil, analysis and design of foundations for vertical vibration-rocking vibration.
Sargand; F; D.

590 Special Investigations (1-5)
Prereq: perm. Special investigations or problems not covered by formal courses and not requiring thesis.
Staff; F, W, Sp, Su; Y.

625 Finite Element Methods in Mechanics (3)
Development of elements from variational principles. Application of finite element methods in static and dynamic continuum problems; computational techniques; interpretation of results.
Staff.

694 Research (1-6)
Prereq: perm. For thesis.

695 Thesis (1-15)

710 Energy and Variational Principles (3)
Prereq: 592 or perm. Provides a solid foundation in variational calculus and energy methods as applied to solid mechanics. Approximate techniques are formulated for geotechnical problems.
Sargand; Sp; D.

723 Continuum Mechanics II (4)
Prereq: 523 or perm. Tensor notation and application. Global behavior of solids, liquids, or gases under the influence of external disturbances. Basic laws of physical phenomena.
Hazen; Sp; D.

730 Finite Element Methods II (3)
Prereq: perm. Formulation and application to 2- and 3-dimensional problems and techniques for analysis in fluid mechanics, elastostatics, elastodynamics, and heat conduction.
Sargand; F; D.

743 Stochastic Modeling (3)
Prereq: MATH 550A or ISE 504 and perm. Review of probability theory, stochastic analysis, geostatistics, analysis of random processes, and applications of stochastic modeling in engineering.
T. Chang; F; D.

750 Design of Water Treatment Facilities (3)
Prereq: 555 and 491B. Selection of processes/operation and design of water treatment facilities.
G. Mitchell, H. Kaneshige; W; D.

751 Sludge Treatment Processes (3)
Prereq: 555 and 556. Characterization of waste sludges from primary, chemical, and biological treatment; design of sludge treatment processes.
G. Mitchell, H. Kaneshige; F; D.

752 Industrial Waste Treatment (3)
Prereq: 555 and 556. Classification, characterization, and study of industrial wastes by industrial category. Selection and combination of unit processes/operations for treatment.
G. Mitchell; Sp; D.

• Electrical and Computer Engineering

Programs leading to the Master of Science and Doctor of Philosophy degrees are offered. Areas of interest include computers and control systems; VLSI design; communications; information and electronic circuitry; solid state; energy conversion and power systems; computer-integrated manufacturing; electromagnetics; avionics, microwave circuits, and network theory.

To be considered for entrance into the master's program, an applicant must have a B.S. degree in electrical engineering or an equivalent degree in physical science, mathematics, or engineering. B.S.E.E. deficiencies must be made up by self study or by auditing (or taking without graduate credit) appropriate undergraduate courses.

Submission of GRE scores is required of all applicants. However, applicants with B.S.E.E. degrees from accredited (ABET) electrical (or electrical and computer) engineering programs may request exemption from this requirement.

To enter the Ph.D. program, the applicant must have an M.S. degree in electrical engineering or equivalent in the physical sciences, mathematics, or engineering.

The master's degree requires 45 quarter hours including nine hours of thesis or, by permission, 48 quarter hours including three hours of project. All students must score a "B" or better in at least 3 of 7 core courses: 506, 526, 543, 555, 562, 571, 611. The Ph.D. requires 45 quarter hours of formal coursework beyond the M.S. and a minimum of 45 hours of dissertation. Students are required to pass a qualifying examination near the beginning of the program and a comprehensive examination at or near the completion of their coursework.

The applicant is encouraged to enter the program in the fall quarter. However, students are accepted in other quarters.

Financial assistance is available in the ECE department via Stocker Fellowships, Stocker Research Associateships, teaching/graduate/research associateships, and scholarships. Stocker fellows and/or associates must be U.S. citizens. Teaching/graduate/research associates are required to work in the department roughly 20 hours per week. All financial assistance is awarded on a competitive basis. Stocker Fellowships and scholarships are awarded on past academic performance, and high academic performance must be maintained for the tenure of the award. Stocker Research Associateships are awarded to students who show a knack and interest for research, and, as a consequence, students who receive these awards are required to perform research duties over the duration of the award. Teaching/graduate associateships are awarded to students judged to be the most qualified for positions supporting the teaching activities within the department. Research associates support various sponsored research projects within the department, and, as a consequence, selections for these positions are made by individual faculty responsible for the research projects. The deadline for receipt of applications for Stocker Fellowships/Associateships is February 15, and for teaching/graduate associateships is March 31.

505 Semiconductor Principles I (3)
Prereq: perm. Simplified one-dimensional band theory of solids. Valence and conduction band occupancy from Fermi-Dirac statistics. Hole conduction and doping. Derivation of PN junction volt-amp- temperature characteristic. DC and AC characteristics of

junction transistors derived from fundamentals.
Curtis; F; D.

506 Advanced Electronic Circuits I (3)
Prereq: perm. Advanced analog circuitry. Operational amplifiers, characteristics, limitations. Linear and nonlinear applications. Feedback, stability criteria compensation, time and frequency response. Waveform generation and shaping, timing, comparison, arithmetic operations.
Curtis; Sp; Y.

507 Advanced Electronic Circuits II (3)
Prereq: perm. Advanced digital circuitry. Basic logic operations, digital device families and characteristics. Arithmetic, counting, memory, other MSI and LSI functions. Numeric display devices. Analog/digital conversion.
Curtis; F; Y.

510 Semiconductor Principles II (3)
Prereq: 505 or perm. Continuation of 505. Application of semiconductor theory to solid state devices: diodes transistors, FETs and Gunn effect devices. Charge control analysis. Ebers-Moll equations. Electro-optical effects.
Curtis; Sp; D.

511 Analog Filters I (3)
Principles of filter synthesis, positive-real functions, synthesis of 1-port networks, synthesis of 2-port networks, approximation, frequency transformations, and filter design.
Mokari; F; Y.

512 Analog Filters II (3)
Prereq: 511. Principles of active filter synthesis, active filter elements, realization of active 2-port networks, multiple feedback filters, explicit formulas and practical filter design. Sensitivity and non-ideal filter elements. Switched capacitor filters.
Mokari; W; Y.

513 Digital Filter Design (3)
Prereq: 511 and 512. Principles of digital filter design, z-transform, discrete Fourier transform, representations of digital filters, digital filter hardware implementations, and computer-aided design of digital filters.
Mokari; Sp; A.

515 Introduction to VLSI (3)
Prereq: 505. Introduction to very large scale integration (VLSI) technology and design of CMOS integrated circuits. VLSI fabrication process; design rules; logic design; performance estimation; chip engineering; computer aids to VLSI design. 3 lec, 2 lab.
Starzyk; W; Y.

525 Control Theory I (3)
Prereq: perm. Formulation of linear models for lumped-parameter physical systems, fundamental principles of closed-loop control, signal flow graphs. Routh-Hurwitz criteria; Root locus method, Bode plots; introduction to control system using Root locus and Bode plots. Special problem required.
Giesey, Irwin; F; Y.

526 Control Theory II (3)
Prereq: 525 or perm. Nyquist stability criterion, Nichols charts, cascade and feedback compensation, frequency domain performance specifications, minor loop design. Special problem required.
Irwin; W; Y.

527 Control Theory III (3)
Prereq: 526 or perm. Sampled-data systems, z-transforms, sampled data system design using digital compensators; state-space concepts.
Irwin; Sp; Y.

531 Introduction to Lasers I (3)
Introduction to the important modern optical devices, lasers, and their applications. Emphasizes the basic physical theory needed to understand lasers, their construction, and their applications. A detailed discussion of various types of lasers and their characterization.
Lozykowski; W; Y.

532 Introduction to Lasers II (3)
Prereq: 531. Continuation of Introduction to Lasers I. Additional theoretical material discussed begins with Maxwell's equations, examines electromagnetic issues that play a major role in laser oscillations—amplification and feedback. Characterization of lasers and continuing discussion of laser types and their applications.
Lozykowski; Sp; Y.

533 Optoelectronic Materials and Devices (3)
Introduction to modern optical materials and devices using semiconductors technology, the optical integration of these devices, and their application in diverse fields. Both fundamentals of devices and materials are emphasized.
Lozykowski; W; D.

540 Microwave Theory and Devices (3)
Prereq: perm. Transmission lines, Smith chart, impedance matching, waveguides, survey of devices (microwave generators, semiconductor devices, etc.).
Radcliff.

541 Antennas I (3)
Prereq: perm. Fundamental concepts and definitions, radiation integrals and potentials functions, linear wire antennas, loops, arrays, matching techniques, antenna measurements, laboratory demonstrations.
Radcliff.

543 Electromagnetics I (3)
Prereq: perm. Mathematical review of vector operations in coordinate-free form. Review of basic equations of electrodynamics. Some general properties of plane waves. Polarization of waves. Plane waves in isotropic media. Wave reflection from interfaces between general media.
H. Chen; F; A.

554 Power Electronics (3)
Prereq: perm. Introduces the graduate student to power electronics. Covers most uses of semiconductor devices for the conversion and control of electric power: ac to dc, ac to ac, dc to dc, and dc to ac conversions; dc and ac motor drives. Semiconductor device characteristics (particularly those parameters not stressed in most undergraduate electronics courses) and device protection conclude the offering.
Hill; Sp; Y; 1990.

555 Introduction to Electric Power System Engineering and Analysis (3)
Prereq: perm. Includes power system representation, computer methods, symmetrical components, protection methods, and stability.
Manhire; F; Y.

556 Introduction to Electric Power System Engineering and Analysis II (3)
Prereq: 555. Continuation of 555. See 555 for description.
Manhire; W; Y.

557 Introduction to Electric Power System Engineering and Analysis III (3)
Prereq: 556. Continuation of 555, 556. See 555 for description.
Manhire; Sp; Y.

561 Digital Systems I (3)
Postulates and fundamental theorems of Boolean algebra; algebraic and map methods for design of combinational logic and simple sequential circuits; logic minimization methods; introduction to system design using shift registers, counters, etc.
Klock; F; Y.

562 Digital Systems II (3)
Prereq: 561. Basic concepts from theory of finite-state machines; analysis and synthesis of sequential circuits; study of state assignment; synchronous and asynchronous machines; system design using integrated circuits.
Klock; W; Y.

563 Digital Systems III (3)
Prereq: 562. Synthesis of sequential circuits using ROMs and RAMs for control logic. Introduction to computer organization and design including selection of instruction set, register and bus organization, and implementation of control logic with microprogrammed control.
Klock; Sp.

564 Engineering Applications of Expert Systems (3)
Prereq: with 495 or perm. Knowledge representation. The process of knowledge engineering. Areas in engineering for expert systems applications. Implementing engineering projects that involve a decision-making process, by using VP-Expert, a PC-based expert systems tool (cross-listed with CS 567).
Vassiliadis; W; Y.

567 Microcomputers I (3)
Prereq: perm. Organization of several minicomputer and microcomputer systems. Theory and application of assemblers, loaders, etc. Numerous control and data acquisition problems programmed

in assembly language on existing computers. Applications in wide range of areas studied.

Klock; F; Y.

568 Microcomputers II (3)

Prereq: 567W. Continuation of 567W.

Klock; W; Y.

570 Communication Engineering (3)

Prereq: perm. Unified approach to communications stressing principles common to all transmission systems. Review of Fourier series. Fourier integral and complex frequency techniques with emphasis on communication networks, time response and convolution, measurement of information, amplitude modulation (double and single sideband techniques), frequency modulation, sampling theory, pulse modulation systems, with emphasis on modern digital signaling techniques including PCM, DPCM, PAM, PDM, PPM, and DELTA modulation; fundamentals of random signal theory and its application to communication systems; noise figure, noise suppression techniques, and other related topics.

Essman; F; Y.

571 Statistical Analysis (3)

Prereq: perm. Analysis of engineering problems using probabilistic and statistical concepts; probability, discrete and continuous random variables, distribution functions, means, moments, characteristic functions, statistical independence, correlation, estimation, and applications to engineering problems.

Essman; W; Y.

572 Random Signals in Linear Systems

Prereq: perm. Introduction to random electrical signals and noise. Autocorrelation, cross-correlation, power spectra, Nth law detectors, matched filters, detection of signals in noise, optimum receivers, Bayes estimators.

Essman; Sp; Y.

579 PCM Telemetry Systems (3)

Prereq: 571 or perm. In-depth study of pulse code modulation systems using total system error (sampling error, quantization error, and channel error). Uniform and nonuniform quantization; companding (u- and A- law); optimum quantization; coding, DPCM (differential pulse code modulation), LDM (linear delta modulation), ADM (adaptive delta modulation). Comparison of systems and trade-off analysis.

Essman; D.

585 Electronic Navigation Systems I (3)

Prereq: perm. Principles and theory of operation of electronic navigation systems with emphasis on avionics; aircraft instrumentation, VOR DME, inertial, Omega, LORAN, ILS, MLS, TRANSIT, GPS, air traffic control, and radar.

van Graas; F; Y.

586 Electronic Navigation Systems II (3)

Prereq: 585 or perm. Continuation of 585 focused on current and future avionics systems and aircraft electronics. Design and signal processing in navigation receivers.

van Graas; W; Y.

587 Electronic Navigation Systems III (3)

Prereq: 586 or perm. Continuation of 585 and 586 with emphasis on mathematical modeling of navigation and landing systems, fault tolerant avionics system design and architecture, night testing, and current developments.

van Graas; Sp; D.

590 Special Topics (1-6)

Prereq: perm. Selected topics of current interest in electrical engineering.

Staff; Y.

611 Circuit Analysis and Design (3)

Review of network analysis and matrix methods. Passivity and positive real functions. Introductory graph concepts and topological network analysis. Indefinite admittance matrix and active two-ports. Amplifier design and stability. High frequency circuits. Time domain versus frequency domain analysis. Nonlinear circuits. Introduction to numerical methods.

Mokari; F; Y.

615 VLSI Systems Design (4)

Prereq: 515. Communication and concurrency in computers; processor arrays; hierarchically organized machines. Structured design; layout algorithms; MOS cell library. Design tools; rule checking; timing analysis; switch level simulation; placement; and routing.

Starzyk; Sp; A.

616 Computer-Aided Analysis of Electronic Circuits (3)

Prereq: perm. Introduction to computer-aided simulation, models of electronic elements, nodal analysis, numerical solution of nonlinear networks, tableau method, multistep numerical integration, sensitivity calculations, sparse matrix techniques, design by minimization.

Starzyk; F; Y.

623 Nonlinear Analytical Techniques (3)

Prereq: perm. Dynamic systems-use and limitations of phase plane portraits in characterization of nonlinear components and nonlinear activation. Nonlinear phenomena and classification of singularities. Role of forcing function. Solutions found through methods of residues and variation of parameters. Selection process as means for decision-making in problem solution; influence of selected criteria. Applications to networks, controlled systems, and optimal control systems. Problems and techniques of Poincaré, Lienard, and others. Systems with analytical solutions. Linearization techniques and error-tolerance determination.

Staff; Su; D.

632 Integrated Optics I (3)

Theory of dielectric waveguides. The waveguide fabrication techniques, materials for waveguides. Waveguide measurements. Materials for active devices: LED's, lasers, and detectors. Fundamentals of optical coupling, input and output couplers, coupling between waveguides.

Lozykowski; Sp; Y.

633 Integrated Optics II (3)

Prereq: 632. Modulators: electro-optic modulators, acousto-optic modulators, Light sources: Light emitting diodes, semiconductor lasers, (homo and heterostructures). Modulation of semiconductor lasers. Detectors for integrated optics application. Application of integrated optics and recent progress in integrated optics.

Lozykowski; F; Y.

641 Advanced Antenna Theory (3)

Theory of dielectric waveguides. The waveguides circular apertures, parabolic and corner reflectors, lenses, continuous sources, and antenna synthesis. Overview of integral equation and optical techniques in antenna theory.

Radcliff; Sp; D; 1989.

645 Electromagnetics II (3)

Prereq: 543. Review of dyad, antisymmetric matrix UxI, solutions of homogeneous and inhomogeneous equations in coordinate-free form. Wave propagation in anisotropic media. Wave propagation in uniaxial media. Radiation in isotropic medium.

Chen; W; A.

646 Electromagnetics III (3)

Prereq: 645. Wave propagation in plasmas and ferrites. Wave propagation in moving media. Radiation in uniaxial medium. Radiation in moving medium.

Chen; Sp; D.

647 Numerical Methods in Electromagnetics (3)

Prereq: 441 or 541. A review of basic integral equation of electromagnetics and an introduction to the method of moments including many practical solution examples. Software provided for many currently used general-purpose codes such as the Numerical Electromagnetic Code (NEC) and MININEC.

Radcliff; Sp; Y.

648 High-Frequency Techniques in Antenna Theory (3)

Prereq: 441 or 541. Geometrical optics, radar cross sections, physical optics, and the Geometrical Theory of Diffraction (GTD). Diffraction theory for both the wedge and convex curved surfaces is presented, along with computer examples. Hybrid GTD-moment method techniques.

Radcliff; D.

661 Hardware Architecture of Computers I (3)

Prereq: CS 542 or perm. Processor level design methodologies. Computer arithmetic and number systems. Fixed- and floating-point ALU design; bit-sliced ALU organization; high performance multifunction array processors. Control organization and instruction sequencing; control implementation techniques and control memory optimization. Memory organization and virtual memories; address mapping; memory allocation and replacement policies; segments, pages and files; caches and associative memories.

Celenk; F; Y; 1989.

662 Hardware Architecture of Computers II (3)

Prereq: 661. Continuation of 661. System organization; bus control and interfacing, bus arbitration, and timing. I/O subsystems; programmed I/O; DMA and interrupts; I/O coprocessors. Introduction to operating systems and systems management.

Celenk; W; Y; 1990.

663 Architecture of Parallel Computers (3)

Prereq: perm. Parallelism in uniprocessor systems. Parallel computer structures: pipeline computers, array processors, and multiprocessor systems. Multiplicity of instruction/data streams: SISD, SIMD, MISD, and MIMD computer organizations; parallelism versus pipelining. Virtual and cache memories; memory allocation; I/O subsystems. Principles of pipelining and vector processing. Pipeline computers and vectorization methods. Structures and algorithms for array processors. SIMD computers and performance enhancement. Multiprocessor computer architecture. Data flow computers and systolic arrays.

Celenk; Sp; Y; 1990.

664 Digital Image Processing (3)

Prereq: perm. Image fundamentals and human visual system: image radiometry, photometry, and colorimetry. Image sensing and formation; imaging geometry, perspective transformations, camera modeling and calibration, stereoscopic imaging. Neighbors, connectivity, and distance measures. Image sampling, quantization, and representation. Linear 2-D transformation techniques: DFT, FFT, Haar, Hotelling, Walsh, Hadamard, and Hough transformations. Image filtering and noise cleaning. Image enhancement and restoration. Image detection and registration. Template matching. Image coding and transmission. Image understanding systems.

Celenk; F; Y; 1990.

665 Computer Vision (3)

Prereq: perm. Computer vision system models. Image analysis and early processing; approaches to image segmentation (edge detection, region growing, histogramming, clustering, split and merge); thinning and contour following. Image feature extraction and texture analysis. Stereo vision and 3-D scene analysis. Geometrical and topological properties of binary images. Higher level processing; shape analysis and description, object representation, and recognition. Photometric stereo and shape from shading. Motion field and optical flow. Motion path planning and visual guidance. Visual inspection and quality control.

Celenk; W; Y; 1991.

666 Pattern Recognition (3)

Prereq: perm. Decision-theoretic pattern recognition and classification. Supervised learning and training algorithms, perceptions, reward and punishment, potential functions, linear discriminants. Bayesian learning, parametric and nonparametric classification, Bayes and Fisher classifiers. Unsupervised learning and clustering; maximum-distance, K-means, and Isodata algorithms, graph-theoretic approach. Feature selection through clustering transformation, entropy minimization, Karhunen-Loeve expansion. Principles of syntactic pattern recognition; formal language theory, recognition grammars, learning, and geometrical inference.

Celenk; Sp; Y; 1991.

667 Introduction to Neural Networks (3)

Prereq: 571 or perm. Fundamentals of artificial neural networks. Training algorithms. Software and hardware ANN products. Current ANN research trends.

Vassiliadis; F; Y.

668 Knowledge-based Systems in Engineering Design (3)

Prereq: 464/564. Advanced topics in knowledge representation. Knowledge-based expert systems for design, planning, and classification. Expert systems integration with data bases, neural networks, and fuzzy logic systems. Languages for symbolic computation.

Vassiliadis; Sp; Y.

671 Digital Signal Processing (3)

Prereq: 312 or equiv. Fundamentals of Discrete-time Systems. The Fourier Transform. Sampling Analog Signals. The Discrete Fourier Series and the Fast Fourier Transform. Harmonic Analysis and Windowing. The z-transform.

Tague; F; Y; 1990.

673 Advanced Topics in Signal Processing (3)

Prereq: 671 or equiv. Digital filter design methodology. Numerical problems in signal processing. Discrete random signals. Introduction to sonar signal processing. Open problems and current research trends.

Tague; W; Y; 1991.

674 Information Transmission (3)

Prereq: 571 Definition of measure of information and study of its properties, efficient representation of discrete message sources, communication channels and their capacity, encoding and decoding of data for transmission over noisy channels and evaluation of bounds to probability of decoding errors, and algebraic theory of error correcting codes.

Staff; D.

675 Introduction to Plasma Dynamics (3)

Prereq: 543. Particle orbit theory, magneto-ionic theory, waves in cold plasmas, waves in warm plasmas.

H. Chen; D.

676 Adaptive Signal Processing (3)

Prereq: 671 or equiv. Signal processing in unknown environments and the need for adaptive systems. Optimum filters. The LMS algorithm. Fast least-squares filters. Applications in array processing and system identification. Current research trends.

Tague; Sp; A; 1989.

677 Modern Spectrum Estimation (3)

Prereq: 671 or equiv. The spectrum estimation problem. History and an overview of spectrum analysis methods. Review of estimation theory. The periodogram and Blackman-Tukey estimators. Parametric spectral estimators. Harmonic analysis in white noise. Open problems.

Tague; Sp; A; 1990.

680 Medical Ultrasonics (3)

Prereq: perm. Fundamental principles of medical ultrasonics. Wave propagation, interaction of ultrasound with tissues, beam formation, clinical instrumentation, bio-effects, and Doppler ultrasound.

Giesey; D.

681 Research in Electrical Engineering (1-6)

Prereq: perm.

Staff; F, W, Sp, Su; Y.

694 Project Report (as recommended by dept.) (3)

Staff.

695 Thesis (1-9)

Prereq: perm.

Staff; F, W, Sp, Su; Y.

698 Seminar (1-4)

Staff; F, W, Sp, Su; Y.

712 Automata Theory (3)

Prereq: perm. Development of capabilities and limitations of computers and other digital systems in terms of Turing machines, push-down automata, and other organizations; relations between grammar of a computer programming language and machine which accepts the language.

Klock; Sp; D.

716 Linear Network Theory I (3)

Prereq: 611 or equiv. High frequency circuit analysis and design using scattering parameters. Broadband limitations on network performance. Signal flow graphs and feedback amplifier theory, stability of feedback amplifiers. Introduction to broadband matching. CAD techniques.

Mokari; W; Y.

717 Linear Network Theory II (3)

Prereq: 716 or equiv. Review of generalized s-parameters. Broadband matching and design of equalizers. Microwave amplifier design and bias considerations. Low noise, broadband, and large signal design methods. Broadband negative resistance amplifiers. CAD techniques.

Mokari; Sp; Y.

718 Network Topology (3)

Prereq: perm. Fundamental concepts in linear graph theory, matrix representation of linear graphs, properties of incidence, circuit and cut-set matrices, graphs and vector spaces, derivation of topological formulae for linear lumped networks, application to analysis and synthesis of communication nets.

Starzyk; W; D.

721 Multiport Synthesis (3)

Prereq: 511, 512. Positive-real and bounded-real matrices. Synthesis of lossless n-ports. Synthesis of n-ports with prescribed immittance matrix. Scattering synthesis.

Starzyk; D.

755 Power System Reliability (3)

Prereq: 557 or perm. Probability Theory; Reliability Concepts; Evaluation of the reliability of generating, transmission, and composite systems. Reliability of interconnected systems and DC transmission systems.

Manhire; F; D.

756 Computer Methods in Power System Analysis (3)

Prereq: 755 or perm. Review of matrix algebra. Incidence and network matrices. Algorithms for formulation of network matrices. Short circuit, load flow, and stability studies.

Manhire; W; D.

757 Probabilistic Simulation of Electric Power Systems (3)
Prereq: 756 or perm. Overview of the long range generation system expansion planning problem. Load duration based simulation and the cumulant method of production costing. Chronological simulation techniques.
Manhire; Sp; D.

771 Fundamentals of Statistical Communication Theory (3)
Prereq: 571. Analysis of nondeterministic signals in linear systems with specific applications to communication systems. Topics include waveform estimation, matched filters, optimum systems, smoothing and prediction, Nth law detectors, digital communication systems, sampling quantizers, encoding, channel error, detection, etc.
Essman; F; D.

772 Modulations Systems (3)
Prereq: 771. Performance of familiar communication systems within context of statistical concepts and random noise representations, correlation and spectra analysis and narrow band noise, linear modulation, synchronous demodulation, suppressed carrier techniques, angle modulation, noise in FM, threshold effects in FM, frequency division, multiplexing, correlation detection, coherent binary signaling, coherent phase-reversal keying, differential phase-shift keying, optimum detection, and decision theory. Individual problems associated with state of art techniques.
Essman; Sp; D.

773 Digital Detection Systems (3)
Prereq: 771 or perm. Detection of digital signals using decision theory concepts, conventional and unconventional communication systems, channel characteristics, Hilbert transforms, signal space representations, optimum detection of known signals, detection of signals with finite number of unknown parameters, estimation, estimator-correlator receivers, and suboptimum receivers. Techniques and problems from current literature.
Essman; W; D.

776 Advanced Plasma Dynamics I (3)
Prereq: 675. Distribution function and Boltzmann equation, transport equation, BV equation, and relaxation model. Landau damping, kinetic treatment of waves in plasmas.
H. Chen; D.

777 Advanced Plasma Dynamics II (3)
Prereq: 675, 776. Continuation of 776. Boltzmann collision term, Chapman-Enskog expansion, BBKY equations for plasma confinement, and stability.
H. Chen; D.

778 Boundary Value Problems I (3)
Prereq: perm. Partial differential equations derived from engineering problems. Topics include linear spaces and operators, eigenvalue and eigenfunctions. Sturm-Liouville systems and Othogonal functions, separation of variables in special coordinate systems, generalized Fourier series, and integrals.
H. Chen; W; D.

779 Boundary Value Problems II
Prereq: perm. Techniques for solving boundary value problems, Green's functions and generalized functions, special methods making use of symmetries, images, inversion, and conformal mapping; introduction to integral equation method.
H. Chen; D.

790 Linear Geometric Control Theory (3)
Prereq: 796 and MATH 511, or perm. Topics include a geometric treatment of controllability and observability in terms of invariant subspaces and the concepts of controlled invariant and controllability subspaces with application to disturbance decoupling and noninteracting control problems.
Lawrence; D.

791 Advanced Digital Control Systems (3)
Prereq: 527 or equiv. Analysis of the effects of signal sampling. Modeling A/D and D/A operations. Application of z-transform to digital control systems, stability techniques. Design of controllers for sampled data systems.
Mitchell, Irwin; W; Y; 1991.

792 Advanced Topics in Automatic Control (3)
Prereq: 526 and 527 or equiv. Basic control system philosophy. Development of control system models. Model reduction. Generalized use of the Nyquist Criterion for determining performance. Model development from test data. Automated and manual frequency response design techniques.
Mitchell; Sp; A; 1989.

793 Nonlinear Control Theory (3)
Prereq: 623 and 790. Introduction to analysis and design of nonlinear control systems using differential-geometric approach. Topics include distributions, nonlinear coordinate transformations, and Frobenius' Theorem with application to nonlinear controllability and observability, feedback linearization, disturbance decoupling, and noninteracting control.
Lawrence; D.

794 Adaptive, Learning, and Self-Organizing Systems (3)
Prereq: perm. Fundamental concepts underlying adaptive, learning, and self-organizing systems. System identification, use of gradient methods, peak-holding systems, application of adaptive principle to autopilot and communication systems. Model reference adaptive control, dual control. Self-tuning control, pattern recognition, discriminant functions, training in classifiers, statistical classification, feature selection and ordering, non-parametric procedure, Bayesian learning, stochastic approximation.
Raju; Sp; A.

795 Random Signal Analysis and Optimal Estimation (3)
Prereq: 527 and 572. Characterization of random processes, identification of signals, parameter and random variable estimation, stochastic optimal control problem, dynamics of stochastic systems, stochastic finite-state machines, stochastic discrete-time systems, stochastic continuous-time systems, Markov systems.
Raju; D.

796 Advanced State Variable Methods in Control (4)
Prereq: 527 and 528. Rigorous treatment of controllability and observability for LTI Systems; Standard State Variable Forms; Duality; Minimal Realizations; Grammians; Eigenvalue Placement with Full State Feedback; Full and Reduced Order Observers; Separation Principle; Robustness; Discrete-time Systems; Multivariable Systems.
Irwin; W; Y; 1991.

797 Linear Optimal Control (4)
Prereq: 796. Performance Functionals Discrete-time Systems; Principle of Optimality; Hamilton-Jacobi Equation; Finite-time Solutions; Steady-state Solutions; Asymptotic Properties; Design.
Irwin; F; Y; 1990.

798 Numerical Methods in Control (4)
Prereq: 796. Basic time domain and frequency domain calculations specialized decompositions; specialized matrix equations and their solutions; calculation of minimal realizations; state space methods of transfer function matrix analysis.
Irwin; Sp; Y; 1990.

819 Theory of Graphs I (3)
Prereq: MATH 510. Fundamental topics of graph theory, e.g., connectedness, path problems, Eulerian graphs, matroids, matching theorems, Hamiltonian directed graphs, acyclic graphs, and partial order. Depth-first search, reducibility of program graph, binary search trees, flows in transport network.
Starzyk; D.

844 Advanced Microwave Networks (3)
Prereq: perm. Analytical study of waveguide junctions, impedance, admittance, and scattering matrices formulations for waveguide junctions, eigenvalue problems, symmetrical devices and directional coupler, group theory and its applications to waveguide junctions.
H. Chen; D.

845 Computer Solutions of Electromagnetic Problems (3)
Prereq: perm. General techniques of solutions suitable for digital computation and their application to electromagnetic field problems of practical interest, matrix formulation of field problems, wire antennas and scatters, generalized network parameters, Galerkins method, Rayleigh-Ritz variational method.
H. Chen; D.

846 Special Topics in Engineering Mathematics (3)
Prereq: perm. Concentrated study of advanced mathematical techniques in analytical solution of engineering problems. Selected topics from recent and/or classical literature of applied mathematics, as integral equations, variational and perturbational methods, applications of theory of a complex variable, theory of distributions. Introduction to functional analysis.
H. Chen; D.

881 Doctoral Research (1-9)
Prereq: perm.
Staff; F, W, Sp, Su; Y.

890 Special Topics in Electrical Engineering (3)
Current developments in electrical engineering. Selected topics offered yearly. May be taken for repetitive and variable credit.
Staff: F, W, Sp; Y.

895 Dissertation (1-9)
Prereq: perm.
Staff: F, W, Sp, Su; Y.

• Industrial and Systems Engineering

The Department of Industrial and Systems Engineering offers three degree options leading to a Master of Science degree including human factors engineering, applied operations research, and manufacturing and ergonomics production systems. Other specialized study concentrations are available in a number of areas of faculty interest including engineering management, computer applications, artificial intelligence, systems simulation, stochastic systems, expert systems, management information systems, quality control and reliability, and engineering statistics.

The focus of graduate educational and research activities is on structuring the decision process, system analysis, and the design of complex systems that integrate technical, human, and economic resources within a variety of constraints and environments.

The option in human factors engineering has been developed for graduates intending to work in such areas as human-computer interaction analysis, human information acquisition, human information processing, human visibility and legibility research, human performance, work and living environment design, and industrial and traffic safety.

The operations research option is designed for those students wanting to specialize in the application of mathematical modeling to industrial or other organizations. This includes optimization theory, queuing theory, and systems applications.

The manufacturing and production systems engineering option spans a broad spectrum of engineering topics, including computer-aided design (CAD); quality and concurrent engineering; computer-aided manufacturing (CAM); computer-integrated manufacturing (CIM); flexible manufacturing systems (FMS); robotics and automation manufacturing systems design; and intelligent systems. (Additionally, the department participates in the Integrated Engineering Ph.D. program, emphasizing intelligent systems engineering. For more information, see the *Graduate Program Guide*, available from the department.)

Descriptions outlining suggested core courses and electives for the options are available upon request. Students are expected to use the core courses outlined in a given program as a guide, with the specific program designed jointly by the student and his or her advisor. A plan of study is required and must be submitted to the ISE Graduate Committee for approval before the end of the first quarter of study.

Each of these options and other concentration areas may be taken with or without a thesis. The thesis option requires a minimum of 45 quarter hours including a maximum of 6 hours of thesis (ISE 695). The nonthesis option requires a minimum of 51 credit hours including a 3-credit-hour scholarly project (ISE 694), a formal written report, a nonthesis committee, and formal defense. Certain undergraduate/graduate courses are required in the undergraduate Industrial and Systems Engineering Program. These graduate courses do not count towards M.S. degree credit. All full-time graduate students are expected to register for three successive quarters of ISE 630 (Seminar) beginning with their first quarter in residence. Up to 6 hours of independent study may be taken for degree credit in addition to ISE 694 or 695.

A maximum of 12 credit hours of elective graduate level courses may be taken outside the ISE Department or the University provided they are included in an approved plan of study. Graduate students also are required to complete at least one-third of their total required hours in graduate-only ISE classes, while the other two-thirds may be ISE graduate classes which are cross-listed with ISE undergraduate electives.

The department welcomes applications from engineering students and qualified students with a bachelor's degree in physical sciences, including mathematics and computer science. Each candidate is evaluated on previous academic record, work experience, and career goals. GRE scores are highly desirable, but not required. A student entering without an adequate background may be required to take additional courses, including calculus and differential equations, probability and statistics, experimental design, engineering economy, computer programming, inventory-production control, digital simulation, quality control, plant design, work design, system design, and human factors, depending on the student's degree of preparation. International graduate students must take ET 501 (Technical Writing), or demonstrate proficiency, before starting their thesis or nonthesis project. Graduate fellowships and graduate and research associateships are available for students with high grade-point averages. International students desiring a graduate associateship must pass a test of clarity of speech (SPEAK test) and normally are not eligible for a graduate appointment of any kind in their first quarter of study.

Equipment in the ISE Department includes computer-controlled devices to simulate automated industrial systems, robots, robot vision system, advanced microcomputer and computer systems, peripheral devices, software packages, an instrumented research car with a TV driver-eye movement recording system, an ASL Model 1998 computer-controlled eye-view monitor system, photometric measurement systems, a TI Explorer LX knowledge processing system, work measurement and work design equipment, and Sun and other computer workstations.

501 Manufacturing Systems Design (4)
Prereq: 330, 333, 440A, or perm. Introduces student to current state-of-the-art and advanced manufacturing systems design concepts in a CIM environment and in a "global economic and marketing system." Uses the "enterprise approach" in a "top down" system design approach to manufacturing system design.

502 Manufacturing Systems (4)
Prereq: perm. Applications of industrial and systems engineering techniques, principles, practices, and methodologies as they relate to the operation, analysis, management, planning, and design of manufacturing systems.

503 Material Handling Systems Engineering (4)
Prereq: perm. Provides an understanding of material handling engineering from a system design and application engineering point of view. Instructs the student in the engineering principles, design criteria operating parameters, performance requirements, equipment resources, and application engineering practices involved in the planning, design, and operation of materials handling systems for manufacturing, physical distribution, and government operations. A materials handling system design project is a required part of the course.

504 Applied Engineering Statistics (3)
Prereq: calculus or perm. Introduction to efficient methods for data collection and analysis. Application of basic statistical tests, techniques, and experimental design to engineering and science data problem areas. 3 lec. (Not for degree credit for M.S., ISE.)
Y.

505 Engineering Statistics I (3)
Prereq: calculus. Applications of probability theory to engineering problems. Discrete and continuous probability distributions, moment generating functions, functions of random variables. (Not for degree credit for M.S., ISE.)
F; Y.

506 Engineering Statistics II (3)
Prereq: 505 or perm. Evaluation of numerous probability distributions for discrete and continuous random variables as useful experimental engineering tools. Includes multivariate distributions and hypothesis testing. (Not for degree credit for M.S., ISE.)
W; Y.

507 Engineering Statistics III (3)
Prereq: course in probability and statistics or perm. Design and analysis of engineering experiments from linear statistical model point of view. Blocking designs, full and fractional factorial designs, analysis of variance, and introduction to response surface methodology. 3 lec. (Not for degree credit for M.S., ISE.)
Sp; Y.

508 Time Series Analysis in Systems Science and Engineering (4)
Prereq: 307 and MATH 340. Data driven approach for determining the most appropriate mathematical model for describing the dynamic behavior of a system. Stochastic difference/differential equations for describing system dynamics. Flexibility of ARMA model for representing system dynamics. Sequential F-test for determining most appropriate ARMA representation. Green's function solution to ARMA models. Eigenstructure analysis of stability and invertability of ARMA models. Applications in prediction, control, and characterization problems.

510 Decision Analysis I (3)
Prereq: perm. Introduction to decision analysis and its applications. Modern utility theory and its application to decision making under risk emphasized. Examples selected from inventory, bidding, purchasing, maintenance, and investment policies. 3 lec.
F; Y.

511 Decision Analysis II (3)
Prereq: perm. Basic theory and applications of Bayesian decision analysis. Emphasis on applications covering wide range of industrial and business problems. 3 lec.
D.

515 Introduction to Systems Engineering (3)
Prereq: perm. Introduction to systems engineering concepts. Systems structure, open-loop and closed-loop systems, positive and negative feedback. Applications to production and inventory systems, population, and physical systems. Design project required. 3 lec. (Not for degree credit for M.S., ISE.)
W; Y.

517 Analytical Foundations of Industrial and Systems Engineering (3)
Prereq: perm. Special analytical techniques introduced for solution of complex industrial and systems engineering problems. Calculus of finite differences, Fourier analysis, and use of transform techniques in linear system analysis; probability implications of transforms, and probability modeling. 3 lec.
F; Y.

522 Seminar on Occupational Safety and Health (3)
Prereq: perm. Historical development of workman's compensation and industrial health and safety; review of federal activities in occupational health and safety with focus on contemporary public policy issues. Specific occupational health and safety issues are dealt with in seminar format.
D.

523 Seminar on Transportation Systems (4)
Prereq: perm. Transportation systems analysis, design, and related topics. Emphasis on industrial and systems engineering approaches to analysis and synthesis. Topic concentration varies from qtr to qtr.
D.

525 Probabilistic System Analysis (4)
Prereq: perm. Applied statistical techniques in selective design and evaluation of physical and nonphysical systems. Tolerances, errors, and variations in parameters of systems viewed in terms of probabilistic distributions and effects on output parameters. 3 lec, 2 lab.
D.

526 Microprocessor Applications (3)
Comparison and contrast of micro-, mini-, and mainframe computers; numbering and arithmetic systems; microprocessor and microcomputer hardware organizations; assembly and high level languages; basic input/output and interfacing concepts; industrial data acquisition, process control and robotics concepts; graphics and industrial applications data processing; and file management for office use and business application. (Not for degree credit for M.S., ISE.)

527 Digital Computer Systems I (3)
Prereq: computer programming course. Overview of digital computer systems. Programming, storage organization, and search; number representations, conversions, and elementary arithmetic operations; addressing and instruction sequencing; multiprogramming, multiprocessing, and real-time systems.
D.

528 Digital Computer Systems II (3)
Prereq: perm. Continuation of 527. See 527 for description.
D.

530 Engineering Economy (3)
Prereq: perm. Economic analysis of engineering projects. Intended to provide both basic theory and practical experience in comparing alternatives for capital expenditures, alternatives for providing needed production or services, and alternatives for income generation. 3 lec. (Not for degree credit for M.S., ISE.)
Y.

532 Inventory and Manufacturing Control I (3)
Prereq: perm. Design of inventory and manufacturing control systems. Forecasting, continuous and periodic review inventory systems. Relationship between production schedules and inventory. Material requirements planning. 3 lec. (Not for degree credit for M.S., ISE.)
F; Y.

533 Digital Computer Simulation (3)
Prereq: perm. Simulation of industrial problems using digital computers. Practical queuing situations emphasized. FORTRAN and user-oriented simulation languages such as GPSS and CSMP used. Projects involving design of simulation programs required. 3 lec, 2 lab. (Not for degree credit for M.S., ISE.)
W; Y.

534 Network Analysis and Scheduling (3)
Prereq: perm. Engineering project planning using such techniques as PERT and critical path method; shortest route; maximal flow; minimal spanning tree; flow graphs; GERT; and other network models. 3 lec.
Y.

535 Quality Control and Reliability (3)
Prereq: perm. Application of statistics to control of quality and reliability in products and services. Design of acceptance sampling and process control systems, including attention to inspection and test methods. Design and implementation of quality assurance programs, nonstatistical dimensions, also treated. 3 lec. (Not for degree credit for M.S., ISE.)
W; Y.

536 Project Management (3)
Development and utilization of network techniques to schedule activities, develop financial budgets, allocate resources, and control progress and costs of practical projects. (No credit for ISE graduate majors.) 3 lec.
D.

537 Modeling and Analysis of Computer Systems (5)
Prereq: perm. Models of batch, time-sharing, or real-time computer systems. Simulation, queuing, scheduling methods, and probability applied. Co-listed with CS 505A.
D.

538 Modeling and Analysis of Computer Systems (5)
Prereq: 537. Continuation of 537. See 537 for description.
D.

539 Information Systems Engineering (3)
Prereq: perm. Design of management information systems. Introduction to language, data structuring, and information systems analysis and documentation, storage, etc.
D.

540A Industrial Plant Design I (3)
Prereq: 333, 433, 445A, or perm. First course in 2-qtr sequence involving project to design manufacturing and storage facilities. Topics include product determination, plant location, analysis of drawings, estimation of production time for each operation, production scheduling and inventory control, selection of equipment, layout of facility, using both computer and conventional techniques, incentive wage systems, and quality control. 2 lec, 2 lab. (Not for degree credit for M.S., ISE.)
W; Y.

540B Industrial Plant Design II (3)
Prereq: 540A. Continuation of 540A. (Not for degree credit for M.S., ISE.)
Sp; Y.

541 Introduction to Operations Research (3)
Prereq: perm. Introduction to basic methodology of operations research in solution of industrial, engineering, and other problems. Application and mathematical structure of such topics as decision theory, linear programming, dynamic programming, replacement models, and queuing theory. (Not for degree credit for M.S., ISE.)
F; Y.

542 Inventory and Manufacturing Control II (3)
Prereq: perm. Multi-echelon inventory systems, scheduling algorithms, horizon planning, control of integrated production, inventory and work-force systems. 3 lec.
W; Y.

543 Work Design in a Technological Society (3)
Prereq: perm. Exploration of interaction between industrial and systems engineering and labor as an institution. Arbitration, technological change, and work organization. 3 lec.
D.

544 Applications of Mathematical Programming (3)
Prereq: perm. Linear systems techniques for optimum solution of industrial, engineering, and other problems. Topics include assignment and transportation problems, simplex method, revised simplex, dual problem, and sensitivity analysis. 3 lec.
W, Su; Y.

545 Systems Design (3)
Prereq: perm. Individual or small-group system design project. (Not for degree credit for M.S., ISE.)
D.

546 Design of Maintenance Systems (3)
Prereq: perm. Provides industrial engineering students with a working knowledge of maintenance systems and the ability to design a maintenance system. Stresses the application of analytical and quantitative industrial engineering techniques to maintenance management. Major emphasis on the design of maintenance systems. Guest lectures, field trips, and a term project which requires students to design a maintenance system for a manufacturing company, using quantitative industrial engineering techniques, are integral parts of the course.

547 Work Physiology and Occupational Biomechanics (4)
Prereq: perm. An introduction to the general theory and methodologies involved in the applied study of work physiology and occupational biomechanics. Students first study the structural and functional design of the human body to determine its implications for the design of physical work, tools, and the workplace itself. After basic knowledge is acquired, applications of the material to classification of work, manual materials handling, tool design, workplace design, and worker selection and training are considered. Finally, selected environmental conditions which alter performance (e.g., vibration, altitude, pressure variations) are discussed.

548 Human-Machine Systems Engineering (3)
Prereq: perm. Role of operator as subsystem in human-machine systems. Design principles for information displays, equipment controls, workplace environments, and life support systems. Human factors experimentation and design project required. 3 lec. (Not for degree credit for M.S., ISE.)
Sp; Y.

549 Cognitive Engineering (4)
Prereq: perm. Addresses in detail human capabilities/limitations in information processing, learning, perception and attention, and applications of this knowledge to the analysis and design of human/machine interfaces in human/machine systems such as cockpits, vehicles, process control centers, and VDT workstations.

550 Technology and Development (4)
Prereq: perm. Role of technology and engineering in development process. Typical topics include technology transfer, technology assessment and development; intermediate technology, appropriate technology, labor intensive technology and industrial development; rural technology. Contemporary and future consideration of relationships between technology and development process.
Sp; Y.

551 Human-Machine Systems Engineering Design (3)
Prereq: perm. Effects of physical environmental stressors on human in human-machine systems examined and appropriate countermeasures designed. Stressors include heat, cold, noise, vibration, lighting, radiation. Design project required. 2 lec, 2 lab.
D.

552 Behavior Systems Engineering Research (3)
Prereq: perm. Research methods and findings in behavior systems research. Individual research project on selected behavior systems engineering problem.

553 Information in Human-Machine Systems Engineering (3)
Prereq: perm. Role of information acquisition and processing examined. Eye scanning behavior emphasized, analysis of stimulus-response, input-output operations in information transmittal. Human factors experimentation and design project required. 2 lec, 2 lab.
D.

554 Advanced Problems in Human-Machine Systems Engineering (3)
Prereq: perm. Analytic and design consideration of complex human-machine systems. Human factors experimentation and/or design project required. 2 lec, 2 lab.
D.

559 Individual Research Problems in Human-Machine Systems Engineering (3)
Prereq: perm.
Y.

561 Fundamentals of Queuing Theory (3)
Prereq: 517, or perm. Queuing theory and its applications. Single and multiple channels with various system parameters and queue disciplines. Both steady state and transient conditions investigated. Real-world data collection required. 3 lec.
Sp; Y.

562 Fundamentals of Dynamic Programming (3)
Prereq: course in probability or perm. Theory and application of dynamic programming to discrete and continuous multistage processors. Principle of optimality; forward and backward recursion; state and decision inversion; converging and diverging branch systems; feed-forward and feedback loops; computational algorithms and programs; stochastic dynamic programming. 3 lec.
D; Y.

563 Fundamentals of Non-Linear Programming (3)
Prereq: 544 or perm. Theory and application of integer programming, convex programming, geometric programming, gradient search methods.
D.

564 Reliability in Design (3)
Prereq: perm. Application of reliability theory to equipment or facilities design. Design of testing systems and procedures for effective reliability measurement and prediction. Analysis of overall system reliability as function of component reliability. 3 lec.
D.

565 Information Systems Design (3)
Prereq: perm. Design and control of information flow in organizations. Information storage and retrieval by data processing equipment. 3 lec.
D.

566 Systems Sampling Methodology and Design (3)
Prereq: perm. Designing industrial process sampling plans for statistical estimates of system means and variances. Stratified, systematic, and simple random sampling. Sampling costs. Problems in work sampling, inspection, and quality control.

567 Environmental Systems Engineering (3)
Prereq: perm. Overview, analysis, and design of selected environmental systems. Problems selected from area of conversion, resource engineering, communication, bioengineering, transportation, pollution, engineering of large structures, and engineering of community systems. 3 lec.
D.

570 Fundamentals of Systems Theory and Methodology I (3)
Prereq: perm. Topics in systems philosophy, methodology, and viewpoint and their application to practical systems, systems design process, criteria selection, and evaluation; experiments for determining system parameters, interdependencies, and constraints. 3 lec.
D.

571 Fundamentals of Systems Theory and Methodology II (3)
Prereq: 570. Continuation of 570. See 570 for description.
D.

580 Seminar on Public Policy and Resource Conservation (3)
Prereq: perm. Exploration of various manifestations of public policy at the national and state level through study of legislation relating to resource conservation and related topics. Engineering implications of these expressions of public policy. Specific content of seminar will change from yr to yr as new legislation appears.
D.

583 Work Design (3)
Prereq: 505 or perm. Design of work systems and measurement of work. Topics include job methods, operation analysis, charting techniques and schematic models, stop-watch time study, work sampling, predetermined time systems, standard data, incentive wage systems, and learning curves. 3 lec, 2 lab. (Not for degree credit for M.S., ISE.)
F; Y.

589 Special Investigations (1-6)
Prereq: perm.
F, W, Sp, Su; Y.

590 Advanced Problems in Computer Application (1-6)
Prereq: perm. Special investigations of advanced systems and industrial engineering problems involving use of digital or analog computers.
F, W, Sp, Su; Y.

630 Seminar in Industrial and Systems Engineering (1)
Current topics and new developments in industrial and systems engineering. Required of all ISE graduate students each quarter until 3 credit hours are earned.
F, W, Sp; Y.

632 Seminar on the Control of Inventory and Manufacturing Systems (3)
Advanced inventory control, scheduling, and forecasting techniques. Critical review of current literature on inventory and

manufacturing control including advanced production scheduling and forecasting techniques. Box-Jenkins Methodology. 3 lec.
Sp; Y.

635 Seminar in Systems Applications (3)
Prereq: 515 or perm. Topics of general current interest and/or particular student interest. In-depth discussion of topics from lecture courses or current research including techniques for selection and decision making.
D.

637 Seminar in Computer Systems (1-3)
Prereq: perm. Analytic examination of selected topics in computer system planning, design, and evaluation. Students present selected papers or their own research, and class participates in constructive discussion. Representatives from government, industry, or other educational institutions invited to lead discussions on topics of current interest.
D.

640 Facilities Layout and Location (3)
Prereq: 440A. Construction and improvement algorithms for discrete layout problems. Math programming formulations for continuous layout problems; planar and network location models. Design of linear, nonlinear, quadratic, and network programming applications. Analysis of tradeoffs between model realism and solvability. Design project required.

642 Warehouse and Distribution Systems Design (4)
Prereq: perm. Quantitative and operational approach to the design of the total receiving, storage, and retrieval system including packaging, palletizing, storage, material handling, order picking, shipping, facility sizing and layout, information systems, and operating policy.

681 Research (1-12)
Prereq: perm.
F, W, Sp, Su; Y.

689 Advanced Topics in Industrial and Systems Engineering (1-6)
Prereq: perm. Readings and lectures.
D.

694 Nonthesis Independent Research (3)
Prereq: perm.
F, W, Sp, Su; Y.

695 Thesis (1-12)
F, W, Sp, Su; Y.

708 Quality Systems (4)
Prereq: applied stats or perm. Modern quality systems concepts of Total Quality Control (TQC), Total Quality Management (TQM), and Quality Function Deployment (QFD), etc., with an emphasis on "quality by design." Includes "Taguchi Methods" for robust product and process design and western experimental design methodology.

709 Intelligent Engineering Systems (4)
Prereq: perm. In-depth study of techniques available in computer technology and human-machine systems to aid in the analysis of decision-making situations using expert systems technology.

732 Seminar in the Control of Inventory and Manufacturing Systems (3)
Prereq: 532 or equiv. Critical review of current literature on inventory manufacturing control. Students present selected papers, and class participates in constructive critique. Related research within department included. Representatives of industry invited to present their control systems for critique.

737 Computer Systems Seminar (1-3)
Prereq: 528 or perm. Analytic examination of selected topics in computer system planning, design, and evaluation. Students present selected papers or their own research, and the class participates in constructive discussion. Representatives from government, industry, or other educational institutions are invited to lead discussions on topics of current interest.

753 Behavioral Communication Systems in Engineering Industry (3)
Prereq: perm. Advanced behavioral systems analysis of transmission of meaning in communications systems. Schematic analysis of stimulus-response, input-output operations in information transmittal. 3 lec.

761 Operations Research I (3)
Prereq: 541. Advanced queuing theory and its applications. Single and multiple channels with various system parameters and queue disciplines. Both steady state and transient conditions are investigated.

762 Operations Research II (3)
Prereq: perm. Advanced topics in dynamic programming, network flow, theory of games, and Markov processes.

763 Operations Research III (3)
Prereq: perm. Advanced topics in integer programming, quadratic programming, convex programming, and other non-linear programming subjects. Applications of Kuhn-Tucker conditions.

772 Optimization of Complex Engineering Systems I (3)
Prereq: perm. Advanced techniques for design and analysis of large-scale engineering systems. Functional analyses, information systems, large-scale programming, and network algorithms.

773 Optimization of Complex Engineering Systems II (3)
Prereq: 772. Continuation of 772.

• Integrated Engineering

An interdisciplinary Ph.D. is offered in three specialty areas: (1) materials processing; (2) geotechnical and environmental; and (3) intelligent systems. An M.S. degree in engineering or a related field is required for admission. An acceptable plan of study is developed on an individual basis by the student's advisor and the student's special committee. Admission to the program is restricted to those students whose plans of study fall within one of the three specialties. An acceptable plan of study must include a set of designated core courses (a list of courses is available in the Dean's Office). In addition to these core courses, students must include courses appropriate for the desired research focus. At least 15 credit hours from each of two departments in the College of Engineering and Technology, or 12 credit hours from each of three departments must be included in the plan of study. A minimum of fifty percent of the coursework must be 700 level or above. All plans of study must include a minimum of 90 credit hours (including 45 credit hours for the dissertation) above the M.S. degree, and they must be approved by the student's special committee and the program steering committee.

Students must satisfactorily complete a qualifying examination near the beginning of the program and a comprehensive examination after completing the coursework. The comprehensive examination measures the student's knowledge and integration of the subjects necessary for the successful completion of the dissertation. The examination consists of two parts: (1) General Exam which tests the student's knowledge of the core; and (2) Optional area exams which test the specialty. For successful completion of the General Exam, a student must complete four of the following six areas: (1) mathematics and basic engineering science; (2) systems analysis and design; (3) probability and statistical analysis; (4) numerical methods in engineering and science; (5) computer-aided design; and (6) linear systems. For the successful completion of the optional area exam, two of the following eight areas must be passed: (1) materials processing; (2) dynamics and control; (3) environmental and geotechnical engineering; (4) stochastic processes in intelligent systems; (5) advanced CAD/CAM; (6) fluid transport phenomena; (7) solid mechanics; and (8) quality systems and human factors.

Further information about admission into this program is available from the associate dean of the College of Engineering and Technology.

881 Doctoral Research (1-15)
Prereq: perm. Doctoral research.

895 Doctoral Dissertation (1-15)
Prereq: perm. Doctoral dissertation.

• Mechanical Engineering

Graduate work leading to a Master of Science degree in mechanical engineering can be formulated with specialization in either design or thermo-fluid sciences. An M.S. with a manufacturing option is also offered. Areas of interest include computer-aided design and manufacturing, microcomputer control and data acquisition systems, automated manufacturing systems, finite element analysis, materials processing, robotics, combustion, energy engineering and management, silicon production, thermo-fluid systems, ceramic powder processing, heat transfer, fluid mechanics, and mechanical design.

A Ph.D. is offered in the areas of materials processing and intelligent systems; these areas include such topics as materials synthesis, solidification processing, extrusion, rolling, computer-aided design/manufacturing, robotics, mechanisms, mechanics, and control systems. For additional description of the Ph.D. program see Integrated Engineering listing.

The basic requirement for admission is a B.S. degree in mechanical engineering. Applicants holding degrees in other fields of engineering or from nonaccredited engineering colleges may be required to make up deficiencies prescribed by the department. The GRE is required, except in extenuating circumstances. Special programs of study leading to the M.S. degree in mechanical engineering are available for students who have earned a B.S. in science with a major in physics or mathematics. These special programs are designed to make up for deficiencies and prepare the student for graduate study in a time span of one to three quarters.

Both thesis and nonthesis options are available for the M.S. program. The minimum requirements for the thesis program are 33 credits of coursework, including 20 credits in the area of specialization, and 12 credits of thesis work which includes attending the graduate seminar. For the nonthesis program, the minimum requirements are 42 credits of coursework, including 27 credits in the area of specialization and 6 credits of special investigation. The program of study must include fundamental courses in areas of design and thermo-fluids. ME 545, ME 596, and ME 597 are required core courses. Students who have not taken the Engineering Training Exam are requested to take a diagnostic examination at the end of the first quarter to assist in establishing an appropriate curriculum. All students are required to attend the graduate seminar.

Financial assistance is available in the form of graduate fellowships, research associateships, and graduate associateships.

The department recommends that the student enter the program in the fall quarter. Students are encouraged to contact the department for details on graduate programs of study.

International students whose proficiency in English is inadequate are encouraged to enroll in the Ohio Program of Intensive English (OPIE) at Ohio University in the summer quarter preceding their first quarter of study in the department.

503 Machine Design I (4)
Prereq: 313, CHE 331. Applications of mechanics, mechanisms, materials, and mechanical processes to the design and selection of machine members and units of power transmission.
K. Halliday, M. Dehghani; Sp; D.

504 Machine Design II (4)
Prereq: 403. Morphology and anatomy of engineering design. Inventiveness, engineering analysis, optimization, statistics, and decision making. Engineering design project. Graduate credit for non-mechanical engineering majors only.
Staff; W.

506 Analysis and Design of Mechanisms (4)
Prereq: perm. Analysis and synthesis of planar and 3-dimensional mechanisms using classical and modern analytical approaches. Structural synthesis of mechanisms and dimensional synthesis of linkages for function generation, path generation, and rigid-body guidance. Applications of matrix methods, optimization techniques, and computer solutions.
Adams; D.

507 Fundamentals of Nuclear Engineering (4)
Prereq: perm. Nuclear engineering, including nuclear reactions, radiation detection and measurement, reactor control, radiation shielding, effects of radiation on materials, uses of radioactive materials.
Lawrence; D.

508 Nonlinear Vibrations (3)
Prereq: perm. Qualitative and numerical study of mathematics and physics of nonlinear systems. Formulations of nonlinear engineering problems, solutions techniques, and stability analysis.
Adams, Halliday; Sp; D.

509 Advanced Machine Dynamics (3)
Prereq: perm. Theoretical analysis and applications of dynamical aspects and problems in machines and their components.
Adams; D.

510 Advanced Vibrations Analysis (4)
Prereq: 592, perm. Vibrations of multi-degree-of-freedom, lumped, parameter systems and of continuous systems such as bars, beams, and plates; numerical methods of solution; use of Rayleigh-Ritz and Galerkin procedures.
Adams, Halliday; F; D.

512 Heat Transfer (4)
Prereq 321, CE 340. Basic concepts of conduction in one or more dimensions, steady and transient modes. Radiation, dimensional analysis, fundamentals of convection in various modes, heat exchanger design. 4 lec. Graduate credit for non-mechanical engineering majors only.
Staff; Sp; Y.

513 Conduction and Radiation Heat Transfer (4)
Prereq: perm. Advanced analytical treatment of conduction and radiation heat transfer. Boundary value problems, orthogonal expansions, moving heat sources, multi-dimensional problems with varying boundary conditions, finite difference analysis, conformal transformations, radiation network matrix analysis, diffuse-specular exchange, Monte Carlo techniques, etc.
Alam, Lawrence; D.

514 Convection Heat Transfer (3)
Prereq: CE 546 or perm. Convection heat transfer. Hydrodynamic and thermal boundary layers in forced and free conversion. 3 lec.
Staff; Sp.

515 Thermal Stress Analysis (3)
Prereq: CE 528, perm. Thermal stresses developed in machine and structural components. Procedures for solving stress problems associated with elevated temperatures in such components as tubes, rods, and plates as encountered in nuclear reactors, engines, and airplane and missile structures.
Dehghani; D.

516 Combustion (3)
Prereq: perm. Kinetic theory and properties of gases, chemical reactions in gases, diffusion flames, detonation, combustion of atomized sprays, combustion diagnostic techniques, combustion and air pollution.
Alam; D.

517 Design of Thermal Systems (4)
Prereq: perm. Design of systems in which thermodynamics and heat and mass transfer are major considerations. Emphasis on total design approach incorporating economic considerations and optimization techniques. Typical systems include power, propulsion, environmental, cryogenic.
Lawrence; W; Y.

518 Mechanical Engineering Experimentation (1)
Instruction in experimental procedure and experience in designing and executing laboratory experiments. Students plan and execute their own experiments to acquire answers to assigned problems. Variety of areas covered including control systems, energy conversion, fluid flow, heat transfer, motion measurements, stress-strain. Instructional guidance provided by entire mechanical engineering staff. Provides familiarity with variety of instrumentation and procedures. 3-qtr sequence with experimental subjects phased with prerequisites.
Staff; F; Y.

519 Mechanical Engineering Experimentation (1)
Continuation of 518. See 518 for description.
Staff; W; Y.

520 Mechanical Engineering Experimentation (1)
Continuation of 519. See 518 for description.
Staff; Sp; Y.

522 Stirling Cycle Machine Analysis (3)
Prereq: 328, ET 240, CE 340, and concurrent with ME 412. Analysis and simulation of Stirling cycle engines, in which the single phase working gas operates in a closed thermal power cycle. Development and use of computer simulation techniques to model the nonsteady flow conditions including thermodynamics, heat transfer, and fluid flow friction effects.
Urieli; W; Y.

524 Gas Dynamics I (3)
Prereq: perm, CE 340. 1- and 2-dimensional gas dynamics isentropic flow, flow with heat transfer, friction, shocks, generalized 1-dimensional flow. Applications to propulsions systems. 3 lec.
Staff; D.

525 Vehicle Propulsion Systems (4)
Prereq: perm, 524. Applications of basic engineering disciplines to design and analysis of ground vehicle propulsion systems. Emphasis on new concepts. Extensive use of computer modeling. Term report required.
Staff; D.

526 Stirling Machine Design Colloquium (2)
Prereq: perm. Unstructured lecture, roundtable discussion, project and model presentation, laboratory. Topics include various practical problems and issues related to the design, development, and testing of Stirling cycle machines and components. Participation of all students is required in terms of podium presentations, projects, and models, as well as a final report.
Beale; D.

534 Fundamentals of Aerosol Behavior (3)
Prereq: 321, 412, or perm. Aerosol characterization transport

properties, convective and enertial deposition, light scattering and visibility, experimental methods, coagulation, gas to particle conversion, general dynamic equation for aerosols.
Alam; D.

535 Energy Engineering and Management (3)
Prereq: perm. Basic concepts and objectives of energy management, energy audit, engineering evaluation of several energy systems, availability analysis, second law efficiency, economic evaluation, and application of these principles to case studies.
Staff; D.

540 Direct Energy Conversion (4)
Prereq: perm. Coupled flows, irreversible thermodynamics, behavior of ionized gases, general principles of unconventional thermodynamics cycles; thermoelectricity, thermionics MHD, fuel cells.
Lawrence; D.

545 Advanced Numerical Methods (4)
Prereq: 597 or equiv. Numerical methods for solution of ordinary and partial differential equations, stability considerations and error estimates, application to variety of engineering problems, numerical method of lines and integration procedures for stiff ODE systems.
Staff; W; Y.

546 Potential Flow Theory (3)
Prereq: perm. Inviscid flow theory. General equations of fluid mechanics, study of potential flows. 3 lec.
Graham; F; Y.

547 Viscous Flow Theory (3)
Prereq: perm. Mechanics of fluid resistance, laminar and turbulent flow, applications to external boundary layer flow and to flow in ducts. 3 lec.
Graham; W; Y.

550 Computer-Aided Design I (4)
Prereq: perm. Applications of contemporary computer modeling techniques to solve complex problems in stress, heat transfer, dynamic systems, and fluid flow. Emphasis given to applications of these techniques to solve specific problems in mechanical-engineering design.
Gunasekera; W; Y.

551 Computer-Aided Design II (4)
Prereq: 550. Existing CAD techniques, graphics input and output of data, advanced CAD system, requirements for a general CAD system, graphical and utility functions, filing facilities, editors, software designs and organization, solid modeling, 3-D display, facilities, application of CAD techniques for finite element data preparation and display, automated mesh generation.
Gunasekera; D.

552 Mathematical Methods in Computer Graphics (4)
Prereq: perm. Introduction to computer graphics technology, points and lines in 2-D, transformations and projects in 2-D and 3-D, scaling, shearing, rotation, reflections, translations, perspective geometry, stereographic projection, parametric curves, conic sections, interpolations, space curves, cubic splines, Bezier curves, B-splines, surface description and generation, bi-cubic surface patch, Coons surfaces.
Gunasekera; D.

553 Advanced Computer Graphics (3)
Prereq: perm. Interactive computer graphics as aid to engineer; advanced hardware devices; Raster graphics systems, color graphics, 3-D transformations and perspectives; use of matrices, perspective depth, hidden surface elimination, and various algorithms; shading and special effects, advanced graphics systems, device independent graphics systems; user interface design, fundamentals of geometric modeling, and use of Boolean operations.
Gunasekera; D.

555 Mechatronics I (4)
Design of intelligent devices. Interfacing of micro- and minicomputers with machines. Microprocessor characteristics, actuator characteristics, visual pattern recognition, design of devices. Theory and laboratory.
Lawrence; W; Y.

556 Robotics II (3)
Prereq: 455 or perm. Continuation of 550. Kinematics and dynamics of computer-controlled machines, robot sensors, and robot-control language concepts. Short laboratory exercises and major robotics project on subjects mentioned above required.
Lawrence; Sp.

557 CAD/CAM I (4)
Prereq: perm. Emphasis on teaching computer-aided design/computer-aided manufacturing with following topics covered: menu basis, training files, interactive graphics design system, mechanical design system, system interfaces with other software, data base management retrieval system, EDG-graphics editor, EDT-VAX/VMS editor and VI UNIX editor; VAX/VMS-based DCL commands, introduction to UNIX and "C," and other topics as needed. Successful completion of an approved minor project also required.
Gunasekera/Mehta; D.

558 CAD/CAM II (5)
Prereq: 557 and/or perm. Continuation of 557; emphasis on advanced application in (a) programming, (b) finite element pre/post processing and analysis, (c) B-Spline and sculptured surfaces, and (d) computer and direct numerical controls (CNC/DNC). Introduction to usage of third-party Finite-element analysis software for metals, polymers, and composites, e.g., ALPID, NIKE, DYNA, TOPAZ, ABAQUS, POLY-CON, NASTRAN, etc. Successful completion of an approved major project also required.
Gunasekera/Mehta; D.

560 Computer-Integrated Manufacturing/Processes (4)
Prereq: 450 or perm. Introduction to numerical control; control systems for NC; communication media; NC programming languages—SPPL and APT; mathematics for NC; Parametric Splines, Bezier Curves and B-Splines; sculptured surfaces, including Coons bi-cubic patch and B-surf.
Gunasekera; D.

561 Design for Manufacture (4)
Interrelationship of design parameters and manufacturing processes. Special emphasis on design for machining, assembly, and automated manufacturing. Computer-aided design techniques and design with nonmetallic materials also discussed.
Halliday; Sp; Y.

562 Manufacturing Processes (4)
Prereq: grad in ME, CHE, or ISE. The basic theory of plasticity and its application to manufacturing processes. Applied theories of metal working processes such as forging, extrusion, rolling, and some aspects of machining; theories of polymer processing, composite and reinforced materials processing, use of application of materials information systems, and mapping techniques.
Gunasekera; W; Y; 1988.

563 Mechanical Metallurgy (3)
Prereq: perm. Origin and control of mechanical properties of metals. Elasticity, plasticity, fatigue behavior, corrosion, and wear. Introduction to fracture mechanics. Thermal, mechanical, and chemical strengthening techniques.
Halliday; D.

566 Analytical Modeling of Manufacturing Processes (4)
Prereq: perm. Modeling of hot forging and extrusion, sheet metal forming modeling using computer, geometric modeling, basis of rigid visco-plastic finite element method, variational theorems, complex boundary condition, typical case studies in manufacture of aero-engine and structural parts, computer simulation of production processes, use of graphics in display of data.
Gunasekera; D.

568 Advanced NC and Computer-Aided Manufacturing (4)
Prereq: perm. NC systems, control system concepts, feedback control system elements, Laplace transforms, system stability and dynamic response of NC systems, NC machine control systems, information interface, input and output media, symbolic codes, verification of input, graphic proofing, advanced APT programming, mathematics for NC, complex surfaces, quadrics, sculptured surfaces, bi-cubic patch, B-surfaces, process optimization, CAM data base.
Gunasekera; D.

570 Energy and the Environment (3)
Prereq: perm. Examination of ramifications of energy in contemporary society. Basic energy concepts; technical considerations of production of energy; conservation strategies; environmental and economic considerations; emerging energy technologies including nuclear, fusion, solar, and wind power. Course designed to prepare individual for effective participation in societal actions related to energy and power.
D.

580 Graduate Colloquium (1)
Structured as an open graduate colloquium for discussion of present research topics as well as possible future areas of interest. Guest speakers, faculty, and graduate students presenting the results of their investigations, with discussion moderated by speakers.
Dehghani; F, W, Sp; Y.

584 Problems in Thermal Machinery I (3)
Prereq: perm. good academic record. Supervised research in thermal machines. Individual work on experimental or analytical project involving current problems. Students should elect 2-term sequence to allow adequate time for completion of meaningful project.
Staff; D.

585 Problems in Thermal Machinery II (3)
Prereq: perm. Continuation of 584. See 584 for description.
Staff; D.

586 Problems in Thermal Machinery III (3)
Prereq: perm. Continuation of 584 and 585. See 584 for description.
Staff; D.

589 Special Investigation (1-6)
Prereq: perm.
Staff; F, W, Sp; Y.

591 Mechanical Vibrations I (3)
Prereq: perm. Characteristic phenomena of mechanical vibrations encountered in machines and structures (of 1-degree-of-freedom) in their quantitative investigation. Simple harmonic motion; free, transient, and forced vibrations; damping effects; demonstrations; computer applications. Graduate credit for non-mechanical engineering majors only.
Adams, Halliday; F; Y.

592 Mechanical Vibrations II (4)
Prereq: 591. Application of matrix methods; 2-degree-of-freedom systems; lumped mass systems with several degrees of freedom; and methods for normal mode determination. 3 lec, 1 computation session.
Adams, Halliday; W.

593 Lubrication and Bearing Analysis (3)
Prereq: perm. Concepts of boundary, hydrostatic, and hydrodynamic lubrication and their application to different bearing geometries. McKee and McKee, Boyd, and Raimondi methods of bearing design and their optimization. Solid lubrication, porous, and gas bearings. Lubrication and wear in living and artificial human joints and human hipjoint prosthesis.
Halliday; D.

594 Advanced Machine Design (3)
Prereq: perm, 403. Advanced considerations in design and analysis of machine members, pressure vessels, impact loading, thermal stress analysis, fatigue in metals. 3 lec.
Adams; D.

595 Introduction to Kinetic Theory and Statistical Thermodynamics (4)
Prereq: perm. Kinetic theory, classical and quantum statistical mechanics with application to engineering devices. 3 lec.
Lawrence; D.

596 Experimental Methods in Design (3)
Investigation and evaluation of experimental methods used to obtain design and performance data. Techniques of photoelasticity, strain measurements; and vibration measurement.
Halliday; F; Y.

597 Methods of Engineering Analysis I (4)
Prereq: perm, MATH 340. Methods of analyzing equilibrium and eigenvalue problems in mechanical engineering and engineering mechanics; matrix methods; variational methods; numerical methods.
Adams; F; Y.

601 Advanced System Analysis and Control (3)
Prereq: 401, MATH 211 or 410 or 411. The application of modern control theories to the synthesis of dynamical systems. Topics include the analysis of the behavior of linear systems, controllability and observability. Synthesis in the eigenvalue domain: modal control. Synthesis of stable systems and optimal linear systems in the time domain.
Fabien.

604 Mechanics and Control of Multi-dof-Systems I (3)
Prereq: perm. Techniques of analysis and design of multi-degree of freedom planar and spatial mechanical systems: kinematic structure, coordinate transformations, inverse solutions, workspace, path selection, dynamics, and control.
Agrawal.

605 Dynamics: Theory and Applications I (3)
Prereq: perm. Partial differentiation of vector functions in a reference frame, configuration constraints, generalized speeds, motion constraints, partial angular velocities, and partial linear velocities, inertia scalars, vectors, matrices, and dyadics, principal moments of inertia.
Agrawal.

606 Dynamics: Theory and Applications II (3)
Prereq: 605, perm. Generalized active forces, contributing and noncontributing forces, generalized inertia forces, relationships between generalized active forces and potential energy, generalized inertia forces and kinetic energy. A continuation of 605.
Agrawal.

607 Optimal Control of Dynamic Systems (3)
Prereq: perm of instructor. Optimization problems for dynamic systems: functional and extremums; continuous systems with terminal and path constraints; integral constraints; multi-stage systems; feedback control for linear systems with quadratic costs; neighbourhood extremal paths and second variation.
Agrawal; D.

620 Free-Piston Stirling Machines (3)
Prereq: 509 or 592, with 522 or perm. Analysis of free-piston Stirling cycle machines. Covers applications to power production, heat pumping, cryocooling, and refrigeration. Analytical solutions to multibody dynamics and mechanical oscillators. Transient performance and stability.
Berchowitz.

622 Design of Stirling Machines (3)
Prereq: 522, with 620. Introduction to the design process. Stirling machine design procedures—scaling, heat exchanger sizing, pV sizing; configurations—crank, hybrid and free piston machines; examination and comparison of existing designs; general issues—materials, stress (fatigue, creep, rupture), seals and bearings, balancing; heat exchanger design, heat transport systems and burners. Group design projects may typically be one of the following: appropriate technology FPSE, regenerator test rig, free cylinder engine with linear alternator, simple crank engine, cooler, free-piston alpha engine, Ringbom engine, Rallis engine.
Staff; D.

625 Stirling Machine Design Project (1-15)
Prereq: 526, 514, 622. The capstone design project for the Stirling Cycle Machines—Design Option; students choose a mentor from the Stirling machine design specialists involved in the Stirling machine industry.
Staff; D.

633 Numerical Heat Transfer and Fluid Flow (5)
Prereq: 513, 546, 547, or perm. Numerical solution techniques in heat and mass transfer, fluid flow, and related processes. Includes governing conservation equations, discretization methods, heat conduction, convection, diffusion, and calculation of flow field.
Alam; D.

675 Destructive Testing of Materials (3)
Prereq: CE 524 or perm. Testing and analytical considerations in destructive testing of materials; interpretation of results and sources of errors in hardness, tensile, impact, fatigue, and pressure testing of materials; residual stress determination in formed metallic parts.
Dehghani.

681 Research (1-15)
Staff; F, W, Sp, Su; Y.

695 Thesis (1-15)
Prereq: perm.
Staff; F, W, Sp, Su; Y.

704 Mechanics and Control of Multi-dof-Systems II (3)
Prereq: 604, perm. Advanced analysis and control techniques for multi-degree-of-freedom mechanical systems: closed-chain mechanisms, space manipulators and structures, redundant mechanisms, dynamic characterization, advanced strategies of control.
Agrawal.

705 Dynamics: Theory and Applications III (3)
Prereq: 606 or perm. Dynamical equations of motion, linearization, steady motions and motions resembling state of rest, integrals of equations of motion, exact closed form solutions, numerical integration of differential equations of motion, determination of constraint forces and constraint torques, collisions, and small vibrations. A continuation of 605, 606.
Agrawal.

712 Advanced Heat Transfer (5)
Prereq: 513, 514, or perm. Advanced analysis of heat transfer, with emphasis on mechanical engineering processes. Lumped, integral, and differential formulations, time dependent boundary

conditions, steady periodic problems. Combined conduction, convection, and mass transfer in complex heat transfer processes.
Alam, Graham.

720 Advanced Nonlinear Finite Element Analysis (5)
Prereq: 551, CE 520, or perm. Advanced study in finite element analysis of solids and fluids, with emphasis on methodologies for nonlinear problems. Fundamental theory and computer implementations of various techniques will be examined. Restricted to small groups, with extensive student participation required.
Dehghani, Gunasekera, Graham, Sargand; F; Y; 1988.

751 Advanced Computer-Aided Design (4)
Prereq: CE 520 or ME 550N and ME 557. Application of advanced CAD techniques to mechanical design problems. Interactive computer programming, mechanical tolerancing. Solid modeling and finite element applications. Pre- and post-processing of FEM data. Automated mesh generation techniques. Cubic splines, B-splines, and sculptured surfaces.
Gunasekera; D.

760 Advanced CAD/CAM/CAE of Dies and Molds (4)
Prereq: 551, 557, or perm. Formulation of the design basis for dies and molds; analysis of material flow through dies; development of criteria for design optimization, heat transfer, and die stress analysis. Theoretical basis for describing 3-D die geometry of complex dies for computer-aided manufacture. Applications in extrusion, forging die casting, and injection molding dies. Development and use of computer software in CAD/CAM/CAE of dies.
Gunasekera; D.

775 Advanced Materials Processing (5)
Prereq: 563, CHE 520, or perm. Uses principles of materials processing technology to study the processing of advanced materials. Casting, rolling, forging, and vapor deposition of advanced materials. Processing of ceramics, composites, high temperature alloys.
Alam, Dehghani, Gulino.

776 Special Topics in Materials Processing (4)
Prereq: 563, CHE 620, or perm. Advanced topics in selected areas of materials processing technology. Processing by deformation, solidification, and deposition are possible areas of study.
Alam, Gulino, Dehghani; D.

785 Plasticity: Theory and Application (4)
Prereq: CE 523, CE 529, ME 597, or perm. Theory of plasticity, stress-strain relations for perfectly plastic and strain hardening materials, yield criteria and constitutive equations of plastic bodies, boundary value problems of plasticity, the slip-line theory and applications.
Dehghani.

889 Special Topics in Mechanical Engineering (1-4)
Prereq: perm. Special advanced topics in mechanical engineering. Course content is determined at the discretion of the instructor. Examples include tribology, spacecraft dynamics, continuum biomechanics, rarefied gas dynamics, plasma heat transfer, surface mechanics, and synthesis of spatial mechanisms.
Staff; D.

■ ENGLISH LANGUAGE AND LITERATURE

MASTER'S PROGRAM

Students enter M.A. programs in English for a variety of reasons. Some wish simply to extend their liberal education beyond the bachelor's level; others want professional training for high school or junior college teaching; still others see the M.A. as a stepping stone to the Ph.D. and a career in college teaching. The Department of English offers an M.A. program that meets the diverse needs of these different students. We believe all students should have a thorough grounding in the basic elements of literary study; thus all students must satisfy a common set of core requirements. We also believe, however, that students should have the right to give their studies a particular emphasis; thus we offer a choice of seven departmental concentrations. These concentrations are carefully selected groups of courses that give each master's program a distinctive focus.

Our M.A. program is a two-year undertaking, although full-time students who are not teaching associates may complete it in less than two years.

Admission

Application must be made to the Office of Graduate Student Services. The applicant should present at least 27 quarter hours (18 semester hours) of superior work on the undergraduate level in English language and literature. He or she should also submit evidence of having completed one full year of college-level foreign language beyond the freshman-level language requirement. This can be either one year of intermediate (sophomore) level or one year of advanced (junior or senior) level foreign language. Applicants who do not meet the foreign language prerequisite, but who otherwise have outstanding qualifications for graduate study, may apply; however, if accepted, they must complete two quarters of a graduate foreign language reading course before graduating. Applications for admission also will be considered from students who have had extensive training in academic fields closely related to English. All applicants should arrange for letters of recommendation from three professors with whom they have studied on the undergraduate level to be sent to the chair of the graduate committee in English.

Applicants must, in addition, submit their scores for the Graduate Record Examination (general test only) and a writing sample. For potential creative writing students, the latter should be a portfolio of poems, a manuscript of short fiction, or a selection of creative nonfiction, which should be mailed to the director of the Creative Writing Program. All other applicants should submit to the chair of English Graduate Studies a critical essay completed for undergraduate academic credit at the junior or senior level.

Qualified applicants may apply for admission for any quarter. Applicants who seek financial aid for the following year must submit application materials no later than March 1.

M.A. Requirements

Students pursuing the Master of Arts in English must satisfy the following requirements:

1. Bibliography and Methods
English 593 deals with enumerative and descriptive bibliography and methods of scholarship. It also provides a general introduction to graduate study and research in English literature and language.

2. English Language
The English language requirement can be met by one of two courses—either English 503, Renaissance English, or English 504, American English.

3. The Teaching of English
English 591, ordinarily taken in the student's first quarter of residence, is designed to offer various kinds of practical and theoretical information and discussions about teaching.

4. Literary Theory or Criticism
Students will take at least one course that has as its primary focus the theory of literature or the strategies of literary analysis and criticism.

5. Proseminar Paper or Master's Thesis
The proseminar normally involves one quarter of classroom work and a second quarter devoted largely to researching and writing a substantial paper. The proseminar is usually taken winter and spring quarters of the student's second year.

The master's thesis is a formal essay of substantial length written under the direction of a member of the graduate faculty and with the approval of a thesis committee consisting of the thesis director and two other members of the graduate faculty. Once the thesis is completed, the student sits for an oral examination with the thesis committee.

6. Area Distribution
Students are required to take seminars in at least three of the following six periods:

Medieval Language and Literature
Renaissance
Restoration and Eighteenth Century
Nineteenth Century
American Literature
Twentieth-Century English and American Literature

Of these three seminars, one must focus primarily on literature before 1700, one on literature after 1700, and one on American literature.

7. Departmental Concentration
Students will elect one of the following concentrations in which they will take a sequence of three courses.

Literary History
Creative Writing
Literary Criticism
Comparative Literature

Teaching of Composition
Women's Studies
English Language

8. Foreign Language
Students should submit evidence of having completed one full year of college-level foreign language beyond the freshman-level language requirement. This can be either one year of intermediate (sophmore) level or one year of advanced (junior or senior) level foreign language. Applicants who do not meet the foreign language prerequisite, but who otherwise have outstanding qualifications for graduate study, may apply; however, if accepted, they must complete two quarters of a graduate foreign language reading course before graduating.

DOCTORAL PROGRAM

The Ph.D. in English is designed primarily as professional training for teachers and scholars of literature and creative writing. Such training requires at least four elements: a solid general background in literary history, a detailed knowledge of a specialized area, successful completion of a scholarly, critical, or creative dissertation, and—for those with associateships—experience teaching a variety of courses.

Admission

Students who have taken the master's degree at a school other than Ohio University and who wish to be admitted to the doctoral program must apply for admission to the Office of Graduate Student Services. Their applications should include complete graduate and undergraduate transcripts, Graduate Record Examination scores, and three letters of recommendation.

M.A. students at Ohio University near the completion of their degree may apply for admission to the doctoral program. Their applications will be considered in light of their performance in the master's program and in competition with applicants from outside the University.

Ph.D. Requirements

General Background

1. **M.A. Requirements.** Doctoral students whose M.A. programs did not include the following requirements, or their equivalents, must fulfill them as part of the Ph.D. program.
The Teaching of English (English 591)
Bibliography and Methods (English 593)
A course in literary criticism
A course in the history of the English or American language

2. **General Course Requirements.** Doctoral students are required to take one doctoral seminar (numbered 700 or above) in an area that is not their area of specialization. They are also required to do three elective graduate courses on either the 500 or 700 level, which may be within or outside their area of specialization.

3. **Foreign Language.** This requirement is satisfied by taking one graduate course in the literature of a language, taught in that language. Students whose proficiency in a foreign language is low should probably take the noncredit graduate reading course in the language first.

4. **Comprehensive General Examination.** Doctoral students take a written examination over all the major periods of British and American literature. This examination is based on a reading list supplied to the student upon admittance. The student will normally take this examination in the spring of his or her first year of doctoral studies. In the event of failure, he or she may retake it one time. If the student fails the second time, he or she cannot continue in the doctoral program.

Area of Specialization

1. **Specialized Course Requirements.** All students take two doctoral seminars in their area of specialization.

2. **The Area Examination.** All students take a written and oral examination in their area of specialization based on an established reading list. This examination is usually taken at the end of the student's second year of doctoral study.

Dissertation and Oral Presentation

The main criterion for the dissertation is quality, not quantity. Students are encouraged to plan dissertations that are original, significant and, ideally, publishable. The number of pages is not crucial; the finished dissertation may fall below the usual 150-200 pages, but the project should nonetheless require an investigative process equivalent to that required of the dissertation of traditional length. Thus, a self-contained section of a proposed book-length study may satisfy the dissertation requirement.

The dissertation may also consist of a series of essays connected in some meaningful way by author, technique, theme, movement, etc. It may be an edition with an appropriate introduction and annotations; a translation or collection of translations; or an original literary work (novel, short stories, poems), provided that the creative writing faculty agree to the project in advance.

Once a topic has been decided upon, the student and his or her advisor draw up a prospectus to be approved by the dissertation committee.

In lieu of the traditional oral examination, the candidate delivers a public lecture on some aspect of his or her dissertation and leads a discussion on the work. A student and his or her committee may, however, in some cases decide that the traditional examination would be more appropriate.

Supervised Teaching

All Ph.D. students holding associateships are expected to teach as part of their professional training. Because Ohio University is a moderate-sized state university, it has a wide variety of undergraduate English courses to be staffed. Consequently, graduate associates receive considerable experience in teaching different courses. Ph.D. graduate associates will usually leave the University having taught at least three or four different courses at the freshman through junior levels. Although they will have received supervision, they will have been primarily responsible for organizing and teaching these classes. Recent Ph.D. graduate associates have found this varied experience particularly valuable when they enter the professional job market.

503 English Language (5)
Sounds, inflections, syntax, and vocabulary of English from 1500 to present. Emphasis is upon language of Shakespeare.

504 American English (5)
Historical and geographical development of American English from a linguistic point of view.

507 The Structure of American English (5)
Study of grammar of English using linguistic model chosen from contemporary linguistic theories.

511 18th Century Novel (5)
Development of novel form in 18th century. Defoe through Austen.

512 19th Century Novel (5)
Critical analysis of novels by Dickens, Thackeray, Trollope, the Brontës, Eliot, Meredith, and Hardy.

515 19th Century Prose (nonfiction) (5)
Studies in nonfiction prose, mainly the personal essay, literary criticism, social criticism, biography.

520 Stylistics (5)
Problems in the description and analysis of style in literature.

524 Shakespeare (5)
Intensive study in specific critical and historical problems.

531 A Major Medieval Genre (5)
Development of major genre: lyric, epic, romance, or drama; close critical attention to representative texts.

532 Renaissance Drama (1590-1642) (5)
English drama (excluding Shakespeare) from Ben Jonson to closing of theaters.

536 History of Criticism (5)
Critical theory and practice.

537 History of Criticism (5)
Continuation of 536.

540 Studies in Comparative Literature (5)
Literary movements, themes, or genres. Different topic studied each time offered, e.g., symbolist and surrealist movement, baroque in western literature, concept of realism or romanticism, grotesque in literature.

541 Studies in Comparative Literature (5)
Continuation of 540. See 540 for description.

542 Studies in Comparative Literature (5)
Continuation of 540 and 541. See 540 for description.

555 English Education Workshop (1-5)
Prereq: teaching certificate or equiv or perm of instructor. Studies in principles, problems, approaches, and issues in teaching of English from elementary school to post-secondary. Topics determined according to need and demand.

561 Colloquium (5)
Specific interdisciplinary problems to be assigned each quarter.

562 Colloquium (5)
See 561 for description.

563 Colloquium (5)
See 561 for description.

570 Studies in Literature (5)
Advanced study of a period or of some aspect of a period (a movement, genre, author, etc.) of English or American literature. Designed to supplement undergraduate training and to provide intensified training in areas of concentration. Following areas scheduled regularly: (A) Medieval language and literature, (B) Age of Chaucer, (C) 16th Century, (D) Spenser, (E) 17th Century, (F) Milton, (G) Restoration, (H) Earlier 18th Century, (I) Later 18th Century, (J) Romantic poets: Blake, Wordsworth, Coleridge, (K) Romantic poets: Byron, Shelley, Keats, (L) Major Victorian poets, (M) Minor Victorian poets, (N) 20th Century, (O) American literature to Civil War, (P) American literature, Civil War to WWI, (Q) Afro-American literature.

575 Teaching Technical Writing (3)
Problems in teaching technical writing. Practice in writing feasibility studies, proposals, progress reports, and a range of minor items from abstracts to letters of transmittal. Techniques and standards of good business and professional writing.

580 Internship (4-5)
Prereq: perm. Internships in various University offices provide students with first-hand, on-the job experience in areas where they may usefully employ their verbal skills and aptitudes. Coordinated by and evaluated by graduate chair in English and director of office in which student is placed.

585 History of Books and Printing (4)
Broad introduction to history of the book and its place in development of Western culture from ancient world to present.

590 Independent Reading (1-5, max 15)
Prereq: perm. Directed individual reading and research.
Staff.

591 Problems in Teaching College English (1-5)
Introduction to methods of teaching literature and writing, with inquiries into various critical approaches, remediation, rhetorical theory, teaching aids, evaluation, counseling and coordination of student, and institutional needs.

592A Major Rhetorical Theories and the Teaching of Composition (5)
Introduction to major rhetorical theories underlying modern composition pedagogy. Invention, form, and style are examined from historical perspective.

592B Composition Research and Teaching (5)
Graduate-level survey of recent and significant research on writing process (composing, revising, editing, audience analysis); other problems in teaching writing also studied (evaluation, basic writing, writer's block, and other special problems).

592C Rhetoric in Reading (5)
Links teaching of writing to teaching of reading through study and application of contemporary theories of reader-text interaction.

593 Bibliography and Methods (5)
Enumerative and descriptive bibliography; methods of criticism and scholarship.

650 Proseminar in Literature (5)
2 qtr study, research and writing program. Winter quarter devoted to comprehensive reading in subject matter area, investigation of nature of literary problems relevant to this area and selection of problems appropriate to graduate writing of papers comparable in scope to master's thesis or scholarly papers.

651 Proseminar in Literature (5)
Prereq: 650. Continuation of 650. See 650 for general description. 651 devoted to further research and writing of papers.

690 Creative Writing Seminar (5)
Prereq: 6 hrs of creative writing. Criticism of manuscripts and discussion of problems of form. Admission only in 1st qtr, except for unusual reason.

691 Creative Writing Seminar (5)
Prereq: 6 hrs of creative writing. Continuation of 690.

692 Creative Writing Seminar (5)
Prereq: 6 hrs of creative writing. Continuation of 690 and 691.

695 Thesis (5-10)

701 Formal Stylistics (4)
Research on selected topic in formal characterization of texts.

715 Theory of Teaching Literature (5)
Discussions of theoretical and practical problems of teaching literature in colleges and universities.

724 Problems in Shakespeare (5)
Prereq: Ph.D. applicancy. Intensive research in specific problems in area of Shakespeare criticism and scholarship.

765 Theory of Literature (5)
Investigations into nature of literature and problems of practical literary criticism.

770 Seminar in Literature (5)
Prereq: Ph.D. applicancy. Three 1 or 2 qtr seminars customarily offered every yr in each of 7 areas. Seminars form sequence of independent units. In any particular yr, more than 3 seminars may be offered in same area (e.g., a sequence in early Renaissance and 1 in late Renaissance or sequence in Romantic and 1 in Victorian). From 3 to 6 seminars may be offered in area, depending upon staff and upon student need. 770 covers Medieval literature.

771 Seminar in Literature (5)
Prereq: Ph.D. applicancy. See 770 for general description. 771 covers Renaissance.

772 Seminar in Literature (5)
Prereq: Ph.D. applicancy. See 770 for general description. 772 covers Restoration and 18th Century.

773 Seminar in Literature (5)
Prereq: Ph.D. applicancy. See 770 for general description. 773 covers 19th Century.

774 Seminar in Literature (5)
Prereq: Ph.D. applicancy. See 770 for general description. 774 covers 20th Century British and American.

775 Seminar in Literature (5)
Prereq: Ph.D. applicancy. See 770 for general description. 775 covers American literature.

776 Seminar in Literature (5)
Prereq: Ph.D. applicancy. See 770 for general description. 776 covers comparative literature.

780 Special Studies Seminar (1-5)
Prereq: Ph.D. applicancy or perm. Seminars on individual writers and individual works. Offered when there is (a) student demand and/or (b) a widely recognized specialist on staff.

781 Research (1-15)
Covers period when student is doing necessary research for prospectus. Also used to cover special research courses, e.g., problems in editing, problems in historical research, etc.

782 Research (1-15)
Continuation of 781. See 781 for description.

792 Problems in Teaching College English (1-5)
Colloquium for apprentice teachers designed to explore alternative approaches to classroom planning and presentation. Encourages exchange of ideas and problems among teachers; evaluation methods, syllabi, and texts; development of a sense of professionalism in teaching.

895 Dissertation (1-15)

■ ENVIRONMENTAL AND PLANT BIOLOGY

Doctor of Philosophy and Master of Science degree programs are offered in the following areas of specialization: biochemistry, cell biology, ecology, evolution, molecular biology, plant morphology, mycology, paleobotany, plant physiology, pteridology, and plant systematics. The department also participates in the interdisciplinary Ph.D. program in molecular and cellular biology and the M.S. program in environmental studies.

To begin graduate study, the student must have at least 24 quarter hours, (or equiv) of botany and/or related biological sciences. Applicants also must have completed genetics, organic chemistry, and quantitative skills (i.e., calculus, statistics, or computer science). Deficiencies in undergraduate preparation may be eliminated during the course of graduate study. Scores from both the aptitude and biology advanced tests of the Graduate Record Examination are required. Foreign applicants whose native language is not English must submit scores from either the English Test of the University of Michigan English Language Institute or the Test of English as a Foreign Language (TOEFL) as an evaluation of English proficiency.

For Ph.D. students, an advisory committee will determine the program of study, including coursework, foreign language, and quantitative skills (e.g., calculus, statistics, computer science). All graduate students are required to teach a minimum of two quarters during their tenure in the department. A research thesis (M.S.) or dissertation (Ph.D.) resulting from original research is required. A nonthesis terminal M.S. degree is also an option.

Applications for admission to graduate study in environmental and plant biology are accepted during all quarters. Applications for financial aid for the following academic year should be received by February 15.

508 Vascular Morphology (6)
Comparative morphology, anatomy, and life histories of vascular plants. 3 lec, 6 lab.
Cantino, Rothwell; W; Y.

510 Biology of Fungi (5)
Life histories and characteristics unique to fungi. Collection and identification of mushrooms, plant pathogens, and slime molds. Biotrophic, saprotrophic, and necrotrophic relationships of fungi with plants. Field and laboratory. 3 lec, 22 hr lab.
Cavender; F; Y.

512 Plant Anatomy (5)
Structure, development, and systematic anatomy of vascular plants. 3 lec, 4 lab.
Rothwell; F; Y.

524 Plant Physiology (5)
Prereq: organic chemistry. Critical examination of experimental basis of plant physiology. Topics include water relations; uptake and transport of ions and nonionic compounds; plant growth regulators and their roles in growth and development; and carbon, nitrogen, and sulfur metabolism in plants.
Smith; W; Y.

525 Plant Ecology (5)
Environmental and biotic effects on species growth and distribution; review of recent ecological literature. 3 lec, 4 lab, 1 Saturday field trip.
McCarthy, Ungar; F; Y.

526 Physiological Plant Ecology (5)
The effects of biotic and abiotic environmental factors on the physiological responses of plants.
Ungar; Sp; Y.

527 Molecular Genetics (3)
Fine structure of gene, biochemistry of gene action, genetic regulation. 3 lec.
Showalter; Sp; A.

531 Cell Biology (5)
Biochemical, cytochemical, and ultrastructural aspects of the nucleus and cytoplasmic organelles, mitosis, meiosis, and cellular differentiation.
Braselton, Cohn, Mitchell; F; Y.

550 Biotechnology and Genetic Engineering (4)
Introduction to basic molecular biological concepts and techniques in biotechnology and genetic engineering, including discussion of current experimentation and progress in these fields.
Showalter; Sp; A.

560 Paleobotany (6)
Morphology, evolution, and stratigraphic position of representative fossil plant groups. Field trips.
Rothwell; Sp; D.

650 Instrumentation and Techniques (5-10)
Instruments and techniques used in solution of contemporary biological research problems. Theoretical and practical aspects included. 5 lec.
Staff; F; D.

654 Phycology (5)
Classification, nomenclature, relationships, morphology, reproduction, life histories, and economic importance of freshwater and marine algae. 3 lec, 4 lab.
Staff; D.

695 Thesis (1-15)
Formal presentation of results of research as partial fulfillment of requirements for M.S. degree. Hrs not counted toward degree.
Staff; F, W, Sp, Su; Y.

753 Developmental Physiology (5)
Growth and developmental phenomena with emphasis on flowering plants. Topics include cell growth and differentiation in developing meristems, tissue and organ development and culture, dormancy and germination, flower induction, seed formation, hormones, senescence, plant movements, phytochrome.
Mitchell; Sp; A.

754 Experimental Ecology (5)
Prereq: 525, 526, or perm. Theory and methods involved in studying natural plant communities. 3 lec, 4 lab.
Ungar; W; D.

757 Plant Speciation (5)
Theories and principles of evolution and speciation in plants, emphasizing microevolution, breeding systems, cytology, species concepts, and species complexes. 2 lec, 6 lab.
Lloyd; Sp; A.

758 Plant Systematics (6)
Principles and methods of systematics; angiosperm taxonomy; processes and patterns of vascular plant evolution. Emphasis in lab on angiosperm floral morphology, pollination mechanisms, and family characteristics. 2 lec, 6 lab. Saturday field trips.
Cantino; Sp; A.

770 Botanical Pedagogy (1-2)
Preparation for botanical teaching in colleges and universities.
Staff; F, W, Sp, Su; Y.

780 Topics in Botany (2-6)
Advanced discussion courses offered when there is sufficient student interest in a significant current topic. Previous topics have included histochemical methods, current problems in biochemistry, plant anatomy, pteridology, and soil microbiology.
Staff; D.

782 Topics in Organismal Botany (2-6)
Advanced discussion courses offered when there is sufficient student interest in a significant current topic. Topics covered in the past include aquatic phycomycetes, cellular slime molds, and pteridology.
Staff; D.

784 Topics in Cell Biology (2-5)
Advanced discussion courses offered when there is sufficient student interest in a current topic. Topics covered in the past include electron microscopy of plant material and relevant methodologies.
Staff; D.

786 Topics in Ecology and Evolutionary Botany (2-6)
Advanced discussion courses offered when there is sufficient student interest in a significant current topic. Topics may include adaptation, population biology, stress tolerance, and pollination.
Staff; D.

790 Colloquium (1)
Discussions of current research by visiting scientists, faculty members, and graduate students.
Staff; F, W, Sp; Y.

791 Seminar (2)
Graduate students present seminars on topics of current botanical interest.
Staff; F, W, Sp, Su; Y.

795 Graduate Research (1-15)
Original research in field of major interest under supervision of student's major advisor. Results and conclusions resulting from research may be presented in M.S. thesis or Ph.D. dissertation as partial fulfillment for respective degrees.
Staff; F, W, Sp, Su; Y.

895 Dissertation (1-15)
Scholarly account of original research in major area of interest as partial fulfillment of requirements for Ph.D. degree.
Staff; F, W, Sp, Su; Y.

■ ENVIRONMENTAL STUDIES

Graduate work leading to the Master of Science degree in environmental studies is developed around an interdisciplinary program of coursework and research. The following four areas of concentration constitute the basis of this program:

Biological Sciences with courses selected from biological sciences and environmental and plant biology.

Physical and Earth Sciences with courses selected from chemical engineering, chemistry, civil engineering, geography, geological sciences, industrial and systems engineering, and mechanical engineering.

Environmental Policy and Planning with courses selected from business administration, civil engineering, economics, industrial and systems engineering, geography, and political science.

Environmental Monitoring with courses selected from biological sciences, chemical engineering, chemistry, civil engineering, environmental and plant biology, geography, and geological sciences.

Specific requirements for each of the concentration areas may be obtained upon request from the program director.

In addition to conventional programs of study developed around the four areas of concentration, students have the option of pursuing a combined master's degree program. Such a program of study allows the student to combine the breadth of environmental studies with the focus of a departmental discipline. Students interested in such a combined program should refer to the Degree Requirments section of this catalog in which University regulations for combined master's degree programs are discussed.

Admission

Admission to the graduate program in environmental studies requires an undergraduate degree in one of the following fields: agriculture, biology, botany, chemistry, ecology, economics, environmental studies, engineering, forestry, geography, geology, microbiology, zoology, or other cognates. Students without a suitable background in one of these fields may be admitted to the program, but will be required to take additional coursework. A transcript of undergraduate work and three letters of recommendation are required with the application for admission. Application for admission to the program may be made at any time. However, students who wish to be considered for financial aid must complete their applications by April 1 of the academic year preceding admission.

The minimal undergraduate grade-point average necessary for unconditional admission is 3.00 (of 4.00). Students with a grade-point average between 2.50 and 3.00 may be admitted on conditional status and must achieve a grade-point average of 3.00 on their first 15 hours of graduate coursework.

Requirements

Each student enrolled in the master's degree program in environmental studies is required to complete at least 45 credit hours of graduate coursework. Of these, at least 12 credits (3 courses) will be core courses, and at least 20 additional credits (4-6 courses) will be in the student's area of concentration. The balance of the 45 hours will come from other graduate courses, plus thesis research—at least 9 hours for students selecting the thesis option—or nonthesis research—at least 3 hours of directed study for students selecting the nonthesis option.

The core area course requirement of 12 hours will be satisfied by successful enrollment in GEOG 547 (Resource Management), BUSL 570 (Environmental Law), and one course from the following group: PBIO 525 (Plant Ecology), BIOS 577 (Population Ecology), and BIOS 578 (Community Ecology).

All students in the program will take a written comprehensive examination and an oral examination during their final quarter of study.

658 Environmental Studies Colloquium (2)
Prereq: M.S.E.S. students only. Orientation course primarily for new students in the M.S.E.S. program. Covers general topics in curriculum, research, and career planning.
Staff; F, W, Sp.

659 Seminar in Environmental Studies (3)
Prereq: enrollment in Master of Science in Environmental Studies Program. Provides forum for discussion and analysis of contemporary environmental problems. Topics will vary and depend on interests of seminar students.
Staff.

■ FILM

The School of Film offers two distinct graduate degree programs: the Master of Fine Arts and the Master of Arts. The Master of Fine Arts is a professional three-year program of study for talented individuals seeking advanced training in directing, screenwriting, producing, cinematography, editing, and motion picture sound with a solid background in film history, theory, and criticism. The Master of Fine Arts is a terminal degree and is designed for students who wish to enter the film industry, to teach at the college or university level, or to make their way as independent film artists.

The Master of Arts is a one-year degree program consisting of two tracks. Track One is a carefully structured two-year program in international film scholarship for students planning continued study at the doctoral level, or planning to enter the international film industry. Track Two is designed to meet the specific needs of experienced, returning students seeking additional training, study, and certification.

The M.F.A. program and both tracks of the M.A. program are designed to allow the entrance of talented students with no formal film training who have demonstrated extensive experience in another medium or academic discipline. However, while prior achievement in filmmaking, video, or film scholarship is not necessary, acceptance to graduate study in the school requires a major commitment to these areas of study.

Graduate study in the School of Film should not be perceived in terms of a vocational trade school; technical knowledge and skills are offered only as tools to achieve creative, conceptual goals. Further, because the film discipline requires full integration and knowledge of related disciplines, all graduate study in film requires a minor area of study outside the school.

The School of Film publishes *Wide Angle*, a quarterly journal of film, hosts the annual Ohio University Film Conference, and with the Peterson Sound Studio, provides students with access to an on-site professional sound mixing facility. The School of Film cooperates with the Athens Center for Film and Video which sponsors the annual Athens International Film Festival, Video Festival, and the Athens Film Society. Students accepted for graduate study in the School of Film may take an active role in center activities.

MASTER OF FINE ARTS

The Master of Fine Arts degree program involves intensive coursework in two areas: film production and film scholarship. The program requires 135 hours of graduate study, including a minor in a related discipline, a 15 credit hour second year production project, and the completion of a creative thesis. While the scope and nature of the thesis will be determined by the student, the thesis advisor, and the film faculty, students should be aware that a feature-length thesis can take the form of (a) a thesis film or films, (b) a thesis videotape or group of videotapes, (c) a narrative screenplay.

Students in the M.F.A. program are required to maintain a 3.00 average in all coursework, and their overall creative and scholastic performance is formally evaluated in three steps:

Advancement to Candidacy. All full-time first-year M.F.A. students will be evaluated at the end of their third quarter of study. At this time, the student is required to have completed 28 hours of film coursework and at least 8 credit hours of a minor, and must submit one completed 16mm answer print produced at Ohio University of graduate-level quality and a minimum of one research paper demonstrating graduate-level coursework, writing, and scholarship.

Portfolio Review. After advancement to candidacy and the completion of a second year of full-time study, the student is required to submit a portfolio of creative work completed at Ohio University to the faculty for formal review.

The Thesis Defense. After completion of the creative thesis, the student must successfully defend his or her thesis before the thesis committee.

Failure twice at any stage of the evaluation process will result in denial of further enrollment in the M.F.A. program.

MASTER OF ARTS

The Master of Arts in film consists of two distinct tracks. Track One, a two-year program, is designed to prepare students for further study at the doctoral level and consists of a carefully designed program in international film scholarship including film history, theory and criticism, and international studies. Track One requires 75 credit hours and a written thesis. Track Two allows returing students to design a program that specifically meets their career objectives. Track Two requires 45 credit hours plus a written thesis.

Track One: International Film

Required coursework for the International Film track includes a three-quarter sequence in film theory and criticism or in international film history, a three-quarter sequence in international cinema, one quarter of film production, and additional courses in film aesthetics, ideology, structural analysis, and contemporary issues in international film. The program also requires completion of a graduate minor in international studies including either study of a second language or, for those who already have a second language, study of computer science. The program is selected in consultation with a faculty advisor.

Final degree requirements include a comprehensive written examination administered during the third quarter of enrollment, evaluated by members of the School of Film faculty. Two thirds of this examination will address the student's major area of study within the school. Failure twice at this stage of the evaluation process will result in denial of further enrollment as a Master of Arts candidate.

After the student has completed comprehensive examinations, after consultation with his or her advisor, after submitting a thesis prospectus to the film faculty, and after selecting a thesis committee, the student begins a written thesis. Upon completion of the thesis, the student must complete an oral defense of it before the thesis committee.

Track Two: Continuing Training for the Returning Student

Required coursework for the Track Two Master of Arts in film consists of at least 45 credit hours of graduate study plus a written thesis. Of the required coursework, 12 credit hours must be a graduate minor in a related discipline. Each student in the Track Two program will design his or her curriculum in consultation with a faculty advisor. Each program must be formally approved by the School of Film faculty.

Candidates for the Track Two Master of Arts in film must complete a comprehensive written examination evaluated by the members of the school faculty. After successful completion of the comprehensive examination, the student initiates a thesis prospectus to be approved by the School of Film faculty in consultation with the advisor. The Track Two thesis is expected to emphasize practical rather than scholarly concerns. After completing the thesis, the student must complete an oral defense of it before the thesis committee.

ADMISSION

Because certain core courses must be taken in sequence, admission to all graduate programs in the School of Film is restricted to fall enrollment.

Students applying for graduate study in film must demonstrate a minimum grade-point average of 3.0 for their undergraduate major and a bachelor's degree or its equivalent from an accredited institution. The undergraduate degree may be in any discipline. Supporting documents required are (a) a transcript of all undergraduate work, (b) three letters of recommendation, (c) a formal application with fee, (d) a sample of the applicant's written work consisting of a paper or papers on any subject, such as a research paper, article, or critical analysis, (e) a brief, 500-word personal essay on the applicant's goals in pursuing graduate study in film and the relationship of previous education and experience to these goals, and (f) for M.F.A. applicants only, examples of creative work such as a film, videotape, or portfolio of work from another medium.

Transcripts, formal application, and fees should be sent directly to the Office of Graduate Student Services, Ohio University, Athens OH 45701-2979. *No application can be processed until the application fee has been received.* All other materials are to be sent to the Director, School of Film, Lindley Hall, Ohio University, Athens OH 45701-2979. The normal deadline for receipt of applications is February 15.

A limited number of scholarships and graduate associateships are available. While a majority of these financial aid awards are normally given to students who have already been approved for M.F.A. candidacy, highly qualified students may receive scholarships or graduate associateships during their first year on campus.

501 Film Symposium (1)
Current issues of film studies. Presentations by students, faculty, and guest speakers.
Staff; F, W, Sp.

521 International Film I (4)
Analysis of the relationship between film and culture, with emphasis on how cultural meanings influence film aesthetics and critical assessment of the medium. Examination of the work of filmmaking nations such as Brazil, China, India, Sweden, and the United States. Weekly screenings.
Staff; F.

522 International Film II (4)
Development of a nation's or cultural region's filmmaking, with emphasis on the films of self-defined identity groups such as Asian- or African-American and women's films. Weekly screenings.
Staff; W.

523 International Film III (4)
Aesthetics and uses of film and related technologies in the study of western and nonwestern peoples, with emphasis on ethnographic and documentary filmmaking. Field exercises. Weekly screenings.
Staff.

531 Film History I (4)
Study of the history of the motion picture. Emphasis on alternatives to the film canon and revisionist approaches to film history. Weekly screenings.
Staff; F.

532 Film History II (4)
History of international silent and sound documentary film. Weekly screenings.
Staff; W.

533 Film History III (4)
History of international silent and sound experimental film. Weekly screenings.
Staff; Sp.

538 Studies in Documentary Film (4)
Development of naturalistic and polemic traditions, cinema verité, and personal documentary. Weekly screenings.
Staff.

541 Film Analysis (4)
Overview for screenwriters and directors of dramatic and filmic structure in contemporary narrative film. A lecture/screening format will be used to study dramatic action, characterization, plot, and scene structure; students will analyze motion pictures as well as scripts on which they were based.
Staff.

542 Scriptwriting (4)
Prereq: perm. Introduction to craft of developing narrative screenplay. Workshop/tutorial approach to study of screenplay structure, format, dialogue, and theory, culminating in completed screenplay. May be repeated for 12 hours.
Staff.

543 Advanced Scriptwriting (4)
Prereq: 541, 542, and perm. Seminar/tutorial approach to the study of advanced problems in writing the narrative screenplay.
Staff.

551 Film Theory and Criticism (4)
Prereq: perm. Examination of various approaches to film theory and criticism including formal aspects of cinema, tools for stylistic analysis, and ideological implications of film. Weekly screenings.
Staff; F.

552 Film Theory and Criticism II (4)
Prereq: 651 or perm. Examination of materialist approaches to film theory and criticism including works of Eisenstein, Arnheim, and Burch. Weekly screenings.
W.

553 Film Theory and Criticism III (4)
Prereq: 652 or perm. Topics in film theory and criticism including feminist perspectives, political cinema, theatricality in film, structuralist and psychoanalytic approaches to film. Weekly screenings.
Staff; Sp.

561 Motion Picture Production I (5)
Prereq: perm. Professional 16mm film production. Instruction in basic camera and lighting technique, elementary film structure, and in-camera editing, leading to production of individual silent film projects.
Staff; F.

562 Motion Picture Production II (5)
Prereq: 561. Continuation of 561 introducing color emulsions and lighting techniques, leading to production of individual color, nonsynch film project.
Staff; W.

563 Motion Picture Production III (5)
Prereq: 562. A continuation of 562 focusing on advanced sound motion picture production techniques, leading to an individual color, synch-sound film project.
Staff; Sp.

564 Video Art I (4)
Prereq: perm. The development of contemporary video and music video within the context of art. Emphasis on time, motion, and color.
Staff.

565 Video Art II (4)
Prereq: 564 and perm. A continued study of contemporary video and music video within the context of art with emphasis on recent technological innovations and their effect on expression.
Staff.

566 Film Methods for Video I (5)
Philosophical and practical blending of film and video with em-

phasis upon current industrial standards for film and video production.
Staff.

567 Film Methods for Video II (5)
Continuation of 566.
Staff.

571 Film Topics Seminar (1-5)
Prereq: perm. Investigation of selected motion picture topic announced in advance of registration. Focus may be scholarly/critical, industry-related, or aspect of motion picture production or screenwriting. Topics and credit hours vary.
Staff; F.

572 Film Topics Seminar (1-5)
Prereq: perm. See 571 for description.
Staff; W.

573 Film Topics Seminar (1-5)
Prereq: perm. See 571 for description.
Staff; Sp.

583 Film/Video Post-Production (2)
Prereq: perm. Practicum course in post-production for students with a film or video project requiring a final edit, conforming, and sound mix.
Staff; F, W, Sp.

633 International Film Seminar I (4)
Prereq: perm. Advanced topics in film scholarship. Weekly screenings.
Staff; F.

634 International Film Seminar II (4)
Prereq: perm. Advanced topics in film scholarship. Weekly screenings.
Staff; W.

635 International Film Seminar III (4)
Prereq: perm. Advanced topics in film scholarship. Weekly screenings.
Staff; Sp.

661 Cinematography (3-5)
Prereq: 563 or perm. Advanced study of aesthetics, techniques, and approaches to cinematography.
Staff.

662 Editing (3-5)
Prereq: 563 or perm. Advanced study of techniques and aesthetics of film and video editing.
Staff.

663 Film/Video Studio Sound (3-5)
Prereq: 563 or perm. Advanced study of audible elements of film including dialogue, sound effects, music, dubbing, looping, and post-production mixing.
Staff.

664 Directing (3-5)
Prereq: 563 or perm. Examination of various theories and techniques of motion picture directing including script analysis and interpretation, directing actors for film and video, *mise-en-scene*, coverage, and continuity through practical directing exercises and lectures.
Staff.

665 Producing (4)
Prereq: 563 or perm. Examination of function of producer in financing, organizing, scheduling, budgeting, managing, and securing distribution for a film.
Staff.

682 Independent Study (1-5)
Prereq: perm. Advanced individual creative or scholarly work in film. May be repeated.
Staff.

691 Thesis Seminar (4)
Prereq: perm. Presentation and discussion of thesis projects in progress. May be repeated.
Staff.

780 Individual Production Problems (1-5)
Prereq: perm of dept. chair. Individual production of motion picture. May be repeated.
Staff.

781 Individual Readings (1-5)
Prereq: perm. Readings and reports on works related to motion pictures. Reading list selected by student in consultation with faculty member. May be repeated.
Staff.

795S Film Studio Thesis (1-15)

795W Film Written Thesis (1-15)

■ FOREIGN LANGUAGES AND LITERATURES

▼ African, Asian, and Middle Eastern Languages

- Arabic
- Chinese
- Indonesian/Malaysian
- Japanese
- Swahili
- Southeast Asian Literature in Translation

▼ Germanic, Romance, and Slavic Languages

- Modern Languages (Professional Courses)
- French
- German
- Italian
- Russian
- Spanish

▼ Greek and Latin Languages

- Greek
- Latin

▼ African, Asian, and Middle Eastern Languages

• *Arabic*

511 Elementary Arabic I (3-5)
Study of spoken and written Arabic.
Hussein; F; Y.

512 Elementary Arabic II (3-5)
Prereq: 511 or equiv. Study of spoken and written Arabic.
Hussein; W; Y.

513 Elementary Arabic III (3-5)
Prereq: 512 or equiv. Study of spoken and written Arabic.
Hussein; Sp; Y.

521 Intermediate Arabic I (3-5)
Prereq: 513 or equiv. Study of spoken and written Arabic.
Hussein; F; Y.

522 Intermediate Arabic II (3-5)
Prereq: 521 or equiv. Study of spoken and written Arabic.
Hussein; W; Y.

523 Intermediate Arabic III (3-5)
Prereq: 522 or equiv. Study of spoken and written Arabic.
Hussein; Sp; Y.

531 Advanced Arabic I (3-5)
Prereq: 523 or equiv. Study of spoken and written Arabic.
Hussein; F; Y.

532 Advanced Arabic II (3-5)
Prereq: 531 or equiv. Study of spoken and written Arabic.
Hussein; W; Y.

533 Advanced Arabic I (3-5)
Prereq: 532 or equiv. Study of spoken and written Arabic.
Hussein; Sp; Y.

• *Chinese*

511 Elementary Chinese I (3-5)
Study of spoken and written Mandarin.
Zhai; F; Y.

512 Elementary Chinese II (3-5)
Prereq: 511 or equiv. Study of spoken and written Mandarin.
Zhai; W; Y.

513 Elementary Chinese III (3-5)
Prereq: 512 or equiv. Study of spoken and written Mandarin.
Zhai; Sp; Y.

521 Intermediate Chinese I (3-5)
Prereq: 513 or equiv. Intensive study of spoken and written Mandarin.
Zhai; F; Y.

522 Intermediate Chinese II (3-5)
Prereq: 521 or equiv. Intensive study of spoken and written Mandarin.
Zhai; W; Y.

523 Intermediate Chinese III (3-5)
Prereq: 522 or equiv. Intensive study of spoken and written Mandarin.
Zhai; Sp; Y.

531 Advanced Chinese I (3-5)
Prereq: 523 or equiv. Intensive study of spoken and written Mandarin.
Zhai; F; Y.

532 Advanced Chinese II (3-5)
Prereq: 531 or equiv. Intensive study of spoken and written Mandarin.
Zhai; W; Y.

533 Advanced Chinese III (3-5)
Prereq: 532 or equiv. Intensive study of spoken and written Mandarin.
Zhai; Sp; Y.

• *Indonesian/Malaysian*

511 Elementary Indonesian/Malaysian I (3-5)
Study of spoken and written Indonesian/Malaysian.
McGinn; F; Y.

512 Elementary Indonesian/Malaysian II (3-5)
Prereq: 511 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; W; Y.

513 Elementary Indonesian/Malaysian III (3-5)
Prereq: 512 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; Sp; Y.

521 Intermediate Indonesian/Malaysian I (3-5)
Prereq: 513 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; F; Y.

522 Intermediate Indonesian/Malaysian II (3-5)
Prereq: 521 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; W; Y.

523 Intermediate Indonesian/Malaysian III (3-5)
Prereq: 522 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; Sp; Y.

531 Advanced Indonesian/Malaysian I (3-5)
Prereq: 523 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; F; Y.

532 Advanced Indonesian/Malaysian II (3-5)
Prereq: 531 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; W; Y.

533 Advanced Indonesian/Malaysian III (3-5)
Prereq: 532 or equiv. Study of spoken and written Indonesian/Malaysian.
McGinn; Sp; Y.

599 Special Studies (1-3)
Prereq: perm. Individual study of selected Southeast Asian topics.
McGinn; F, W, Sp, Su; Y.

• *Japanese*

511 Elementary Japanese I (3-5)
Study of spoken and written Japanese.
Koda; F; Y.

512 Elementary Japanese II (3-5)
Prereq: 511 or equiv. Study of spoken and written Japanese.
Koda; W; Y.

513 Elementary Japanese III (3-5)
Prereq: 512 or equiv. Study of spoken and written Japanese.
Koda; Sp; Y.

521 Intermediate Japanese I (3-5)
Prereq: 513 or equiv. Study of spoken and written Japanese.
Koda; F; Y.

522 Intermediate Japanese II (3-5)
Prereq: 521 or equiv. Study of spoken and written Japanese.
Koda; W; Y.

523 Intermediate Japanese III (3-5)
Prereq: 522 or equiv. Study of spoken and written Japanese.
Koda; Sp; Y.

531 Advanced Japanese I (3-5)
Prereq: 523 or equiv. Study of spoken and written Japanese.
Koda; F; Y.

532 Advanced Japanese II (3-5)
Prereq: 531 or equiv. Study of spoken and written Japanese.
Koda; W; Y.

533 Advanced Japanese III (3-5)
Prereq: 532 or equiv. Study of spoken and written Japanese.
Koda; Sp; Y.

• *Swahili*

511 Elementary Swahili I (3-5)
Study of spoken and written Swahili.
Amoako; F; Y.

512 Elementary Swahili II (3-5)
Prereq: 511 or equiv. Study of spoken and written Swahili.
Amoako; W; Y.

513 Elementary Swahili III (3-5)
Prereq: 512 or equiv. Study of spoken and written Swahili.
Amoako; Sp; Y.

521 Intermediate Swahili I (3-5)
Prereq: 513 or equiv. Study of spoken and written Swahili.
Amoako; F; Y.

522 Intermediate Swahili II (3-5)
Prereq: 521 or equiv. Study of spoken and written Swahili.
Amoako; W; Y.

523 Intermediate Swahili III (3-5)
Prereq: 522 or equiv. Study of spoken and written Swahili.
Amoako; Sp; Y.

531 Advanced Swahili I (3-5)
Prereq: 523 or equiv. Study of spoken and written Swahili.
Amoako; F; Y.

532 Advanced Swahili II (3-5)
Prereq: 531 or equiv. Study of spoken and written Swahili.
Amoako; W; Y.

533 Advanced Swahili III (3-5)
Prereq: 532 or equiv. Study of spoken and written Swahili.
Amoako; Sp; Y.

Southeast Asian Literature in Translation

540 Traditional Literature of Southeast Asia (3)
Survey of traditional literature of Southeast Asia in translation.
McGinn; W; Y.

545 Modern Literature of Southeast Asia (3)
Survey of modern literature of Southeast Asia in translation.
McGinn; Sp; Y.

▼ Germanic, Romance, and Slavic Languages

MODERN LANGUAGES

Master of Arts programs are offered in French and Spanish. Both a master's program with thesis and a nonthesis program are available. Courses for a secondary area can be taken in any language offered by the Department of Modern Languages. Within the Spanish M.A. program, one of three options may be chosen by the candidate: Hispanic literature, pedagogy, or general Hispanic studies. Qualified students may apply for admission to a graduate degree program in modern languages in any quarter. Application materials must be received one quarter prior to the quarter for which the student seeks admission. Applicants wishing to be considered for financial aid for the following academic year must submit application materials by March 1. Students are urged to travel and study abroad, especially during the summer. Qualified teaching associates may have an opportunity to teach in one of the department's four programs abroad.

A student also may earn a Master of Education with certification and a major in one modern foreign language, or a Ph.D. in education with 11 graduate courses in one modern foreign language. Students interested in these programs should consult with the College of Education for further information.

To begin a graduate major in a modern foreign language, the student should have completed an undergraduate major of 36 quarter hours beyond course 213 or the equivalent in that language. To begin work in a secondary area of modern languages, the student should have completed a minimum of six hours of undergraduate work at the 300 level or the equivalent in the language. Deficiencies in undergraduate preparation can be made up during the summer quarter preceding graduate work or during the first quarter of study.

At least 11 graduate courses in the major field are required for the M.A. degree. The student also must demonstrate a reading knowledge of a second modern language or Latin, to be shown either by passing 213 in a modern foreign language, Latin 213, or an equivalent intermediate course with at least a grade of B; passing the examination given for 513 (ETS Foreign Language Tests or a translation test prepared by the Modern Languages Department); or by passing a literature course in the foreign language. In lieu of a foreign language, a student may present two graduate courses in linguistics which are to be in addition to the 11 graduate courses required for the M.A. degree. Teaching associates are required to register for one hour of 699 each of the first three quarters they are on financial appointment. The student must pass a written and an oral comprehensive examination, based on coursework and a reading list.

For further information regarding admissions, program options, and degree requirements, write to the Graduate Chair, Department of Modern Languages, Ellis Hall, Ohio University, Athens OH 45701-2979.

• *Modern Languages*

510 Supervised Practice and Research in Language Laboratory (4)
For graduate students in teaching English as a foreign language, modern foreign language graduate associates, graduate teaching associates in linguistics, graduate education students, and teachers in secondary schools and colleges.

545 Teaching of Modern Foreign Languages (4)
Problems confronting students on level of instruction (elementary school, secondary school, college) at which they teach or plan to teach.

590 Special Topics (1-15, max 15)
Special graduate-level projects in various areas of modern foreign language study (literature, civilization, language development, and language technology) for graduate students with insufficient foreign language proficiency to participate in MLD graduate-level courses offered in the target languages. This course is not intended as a substitute for the 611-612-613 sequences in French, German, Italian, Russian, and Spanish. (Credit does not count toward M.A. in French or Spanish.)

• *French*

511 French for Graduate Reading Requirement (3-5)
Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (Credit does not count toward degree.)

512 French for Graduate Reading Requirement (3-5)
Continuation of 511. See 511 for description.

513 French for Graduate Reading Requirement (3-5)
Continuation of 511 and 512. See 511 for description.

515 French Literature of the Renaissance (5)
Major 16th century poets, including DuBellay and Ronsard.

516 French Literature of the Renaissance (5)
Major 16th century prose writers, including Rabelais and Montaigne.

518 17th Century French Literature (5)
Works by numerous authors, including at least some of the following: Descartes, Pascal, Mme de La Fayette, La Rouchefoucauld, La Bruyére, La Fontaine, and Boileau.

519 17th Century French Literature (5)
Major plays of Corneille, Racine, and Molière.

523 18th Century (5)
French literature and thought in Age of Enlightenment.

524 18th Century (5)
Continuation of 523.

525 Romanticism (5)
Romanticism in drama, poetry, and fiction of first half of 19th century.

526 Realism and Naturalism (5)
Major fictional works of 19th century.

527 French Poetry in the Second Half of the 19th Century (5)
Poetry of Baudelaire, Verlaine, Rimbaud, Mallarmé, and others.

529 20th Century French Literature (5)
French prose fiction before WW II.

531 20th Century French Literature (5)
French prose fiction since WW II

533 20th Century French Literature (5)
French drama of the 20th century.

537 Applied Phonetics (5)
Systematic study of segmental and prosodic elements of French pronunciation including extensive oral practice.

539 Modern French Usage (5)
Fine points of grammar. Practice in composition and analysis of texts.

541 Stylistics (5)
Composition. *Explication de texte*. Translation of English into French. Study of French prosody.

559 French Civilization and Culture (5)
Social, political, and cultural development of France from its origins to French Revolution.

560 French Civilization and Culture (5)
Social, political, and cultural development of France from French Revolution to present.

561 Graduate Study in France (as recommended by dept)
Prereq: perm. Research project must be approved by graduate committee. Research paper must be presented to graduate committee by end of qtr following foreign study.

562 Graduate Study in France (as recommended by dept)
Prereq: perm. Continuation of 561. See 561 for description.

563 Graduate Study in France (as recommended by dept)
Prereq: perm. Continuation of 561 and 562. See 561 for description.

602 Seminar (5, max 10)
Advanced study of period, movement, genre, work, or author.

603 Seminar (5, max 10)
See 602 for description.

695 Thesis (as recommended by dept) (1-9)
Prereq: perm.

696 Directed Readings in French Language, Literature, and Culture (1-5)
Prereq: perm. Supervised reading in selected areas for students preparing for comprehensive exams. Final grade is recorded when departmental comprehensive examination has been taken.

698 Independent Study in French (1-4, max 4)
Prereq: perm. Supervised reading on a specific topic.

699 Problems in Teaching College French (1, max 3)
Designed to provide guidance for teaching associates in first yr of instructing college students in beginning language course. Methods of presentation and difficulties in grammar and syntax discussed. Skill of making valid and fair tests developed.

• *German*

511 German for Graduate Reading Requirement (3-5)
Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (Credit does not count toward degree.)

512 German for Graduate Reading Requirement (3-5)
Continuation of 511. See 511 for description.

513 German for Graduate Reading Requirement (3-5)
Continuation of 511 and 512. See 511 for description.

525 Studies in 19th Century German Literature (5)

526 Studies in 19th Century German Literature (5)
Continuation of 525.

527 Studies in 19th Century German Literature (5)
Continuation of 525 and 526.

529 Studies in 20th Century German Literature (5)

530 Studies in 20th Century German Literature (5)
Continuation of 529.

531 Studies in 20th Century German Literature (5)
Continuation of 529 and 530.

533 German Lyric Poetry (5)
Interpretative and critical study of German lyric poetry.

539 Grammatical Structure (5)
Selected problems in analysis and classroom presentation of German morphology and syntax.

541 Stylistics (5)
Advanced writing and stylistic analysis. Practice in variety of nonfiction prose techniques.

553 Studies in 18th Century German Literature (5)
Major works of Lessing, Schiller, and Goethe.

554 Studies in 18th Century German Literature (5)
Continuation of 553. See 553 for description.

555 Studies in 18th Century German Literature (5)
Continuation of 553 and 554. See 553 for description.

559 German Culture and Civilization (5)
Cultural and political development of Germany from its beginning to the demise of Holy Roman Empire of German Nation.

560 German Culture and Civilization (5)
Cultural and political development of Germany in 19th and 20th centuries.

561 Graduate Study in Germany, Austria, or Switzerland (as recommended by dept)
Prereq: perm. Research project must be approved in advance.

562 Graduate Study in Germany, Austria, or Switzerland (as recommended by dept)
Prereq: perm. Continuation of 561. See 561 for description.

563 Graduate Study in Germany, Austria, or Switzerland (as recommended by dept)
Prereq: perm. Continuation of 561 and 562. See 561 for description.

602 Seminar (5, max 10)
Topics to be announced. Students may repeat seminar as often as subject changes, up to maximum of 10 credit hrs.

603 Seminar (5, max 10)
Continuation of 602. See 602 for description.

698 Independent Study in German (1-4, max 4)
Prereq: perm. Supervised reading on a specific topic.

• *Italian*

511 Italian for Graduate Reading Requirement (3-5)
Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (Credit does not count toward degree.)

512 Italian for Graduate Reading Requirement (3-5)
Continuation of 511. See 511 for description.

513 Italian for Graduate Reading Requirement (3-5)
Continuation of 511 and 512. See 511 for description.

561 Graduate Study in Italy (as recommended by dept)
Prereq: perm. For study either in Ohio University's Summer Program in Italy or at accredited Italian university during academic yr. Highly qualified student may go to Italy to complete research for graduate paper. Paper must be presented to departmental graduate committee by end of qtr following study in Italy.

562 Graduate Study in Italy (as recommended by dept)
Prereq. perm. Continuation of 561. See 561 for description.

563 Graduate Study in Italy (as recommended by dept)
Prereq: perm. Continuation of 561 and 562. See 561 for description.

• *Russian*

511 Russian for Graduate Reading Requirement (3-5)
Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (Credit does not count toward degree.)

512 Russian for Graduate Reading Requirement (3-5)
Continuation of 511. See 511 for description.

513 Russian for Graduate Reading Requirement (3-5)
Continuation of 511 and 512. See 511 for description.

698 Independent Study in Russian (1-4, max 4)
Prereq: perm. For students who have established superior records and who have exceptional or native fluency in Russian.

• *Spanish*

511 Spanish for Graduate Reading Requirement (3-5)
Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (Credit does not count toward degree.)

512 Spanish for Graduate Reading Requirement (3-5)
Continuation of 511. See 511 for description.

513 Spanish for Graduate Reading Requirement (3-5)
Continuation of 511 and 512. See 511 for description.

521 Old Spanish Language and Literature (5)
Phonology, morphology, and syntax of Old Spanish. Reading from Cantar de Mio Cid, Gonzala de Berceo, Juan Ruiz, and other works. Knowledge of Latin recommended.

522 Old Spanish Language and Literature (5)
Continuation of 521. See 521 for description.

525 19th Century Spanish Literature (1800-1850) (5)
Romanticism, costumbrismo, and other movements in drama, essay, and poetry.

527 19th Century Spanish Literature (1850-1900) (5)
Evolution of the novel in the 19th-century Spain, including novels selected from the work of the following: Valera, Pereda, Galdos, Alas, Pardo Bazan, Blasco Ibanez.

529 Generation of '98 (5)
Representative works by early 20th-century Spanish writers, including at least some of the following: Azorin, Baroja, Valle-Inclan, A. Machado, Perez de Ayala, Ortega y Gasset, and Juan Ramon Jiminez.

532 20th Century Spanish Literature (5)
Study of poetry, novel, and drama in Spain since 1925. Works by various authors, including at least some of the following: Lorca, Salinas, Guillen, Aleixandre, Bousono, Valente, A. Gonzalez, Buero, Cela, Delibes, Martin-Santos, J. Goytisolo, Martin Gaite.

537 Applied Phonetics (5)
Systematic description of the sound system of Spanish.

539 Modern Spanish Usage (5)
The grammatical structure of modern Spanish.

541 Stylistics (5)
Analysis of literary styles and study of techniques used to acquire correct style in writing Spanish.

543 Spanish American Literature (5)
Main movements of Spanish American literature from colonial period through Modernismo.

544 Spanish American Literature (5)
Continuation of 543.

547 Themes from Spanish American Prose (5)
Main movements of Spanish American literature from Modernismo to contemporary period.

548 Contemporary Spanish American Literature (5)

553 Drama of the Golden Age (5)
Works by Lope de Vega, Calderon de la Barca, Tirso de Molina, Juan Ruiz de Alarcôn, and related dramatists.

555 Novel of the Golden Age (5)
Picaresque novel, Cervantes' Novelas Ejemplares, and other examples of the novel from this period.

557 History of the Spanish Language (5)
Evolution of Spanish language from pre-Romance Iberian languages to present. Consideration of contemporary dialects.

558 Don Quijote de la Mancha (5)
Intensive study of Part One and Part Two of Spain's greatest novel.

559 Spanish Civilization and Culture (5)
Comprehensive survey of Spanish civilization and culture including setting, historical background, regionalism, intellectual currents, and movements in arts which lead into and form modern Spain.

560 Spanish American Civilization and Culture (5)
Reading and interpretation of Spanish American philosophical, political, historical, social, and artistic thought as expressed in essay. Occasional visits of lecturers from other disciplines will provide different perspectives on same subject and thus cross-fertilization of ideas.

561 Graduate Study in Spain or Latin America (as recommended by dept)
Prereq: perm. Research project must be approved by graduate committee. Research paper must be presented to graduate committee by end of qtr following foreign study.

562 Graduate Study in Spain or Latin America (as recommended by dept)
Prereq: perm. Continuation of 561. See 561 for description.

563 Graduate Study in Spain or Latin America (as recommended by dept)
Prereq: perm. Continuation of 561 and 562. See 561 for description.

602 Seminar (5, max 10)
Advanced study of period, genre, work, or author in 1 of the following areas: (a) literature of the Middle Ages, (b) Renaissance, (c) modern Spanish literature, (d) Latin American literature. (May be repeated when topic is changed.)

603 Seminar (5, max 10)
Continuation of 602. See 602 for description.

695 Thesis (as recommended by dept) (1-9)

696 Directed Readings in Spanish Language, Literature, and Culture (1-5)
Prereq: perm. Supervised reading in selected areas for students preparing for comprehensive exams. Final grade is recorded when departmental comprehensive examination has been taken.

698 Independent Study in Spanish (1-4, max 4)
Prereq: perm. Supervised reading on a specific topic.

699 Problems in Teaching College Spanish (1, max 3)
Designed to provide guidance for teaching associates in first yr of instructing college students in beginning language course. Methods of presentation and difficulties in grammar and syntax discussed. Skill of making valid and fair tests developed.

Greek and Latin Languages

Classical Languages

598 Independent Study in Classical Literature (1-5, max 10)
Prereq: perm. Supervised reading on a specific topic.

Greek

501 Beginning Greek (3-5)
Grammar, vocabulary, and reading of ancient Greek. Students will be introduced to Ionic, Attic, and Koine (New Testament) dialects.

502 Beginning Greek (3-5)
Prereq: 501 or equiv. Continuation of 501. See 501 for description.

503 Beginning Greek (3-5)
Prereq: 502 or equiv. Continuation of 501-502. See 501 for description.

504 Greek Prose and Poetry (3-5)
Prereq: 1st yr Greek. Review of language principles. Readings adapted to needs and interests.

505 Greek Prose and Poetry (3-5)
Prereq: 504. Continuation of 504. See 504 for description.

506 Greek Prose and Poetry (3-5)
Prereq: 505. Continuation of 504-505. See 504 for description.

511 Greek Epic Poets (3-5)
Prereq: 506 or equiv. Readings in Greek from Homer and Hesiod.

512 Greek Tragedy (3-5)
Prereq: 506 or equiv. Readings in Greek from Aeschylus, Sophocles, and/or Euripides.

513 Readings in Greek Intellectual History (3-5)
Prereq: 506 or equiv. Readings in Greek from Plato, Thucydides, and/or the Sophists.

514 Greek Historians (3-5)
Prereq: 506 or equiv. Readings in Greek from Herodotus and Thucydides.

515 Greek Comedy (3-5)
Prereq: 506 or equiv. Readings in Greek from Aristophanes.

516 The Greek New Testament and the Milieu of Early Christianity (3-5)
Prereq: 506 or equiv. Readings in Greek from the New Testament, the early Greek fathers, and/or non-Christian writers of interest for the study of early Christianity.

598 Independent Study in Greek (1-5, max 10)
Prereq: perm. Supervised reading in Greek on a specific topic.

Latin

The prerequisite for a graduate minor in Latin is 18 hours of Latin above two high school units.

501 Latin for Graduate Reading Requirement (3-5)
Preparation for reading knowledge examination required by certain departments for master's and Ph.D. degrees. (Credit does not count toward degree.)

502 Latin for Graduate Reading Requirement (3-5)
Continuation of 501. See 501 for description.

503 Latin for Graduate Reading Requirement (3-5)
Continuation of 501 and 502. See 501 for description.

511 Studies in Latin Literature of the Republic (3-5)
Extensive reading or study of special topics in period.

512 Studies in Latin Literature of the Republic (3-5)
Continuation of 511. See 511 for description.

513 Studies in Latin Literature of the Republic (3-5)
Continuation of 511 and 512. See 511 for description.

515 Studies in Latin Literature of the Early Empire (3-5)
Extensive reading or study of special topics in period.

516 Studies in Latin Literature of the Early Empire (3-5)
Continuation of 515. See 515 for description.

517 Studies in Latin Literature of the Early Empire (3-5)
Continuation of 515 and 516. See 515 for description.

519 Graduate Reading in Latin Literature (3-5)
Reading and essays to complement undergraduate work in Latin.

520 Graduate Reading in Latin Literature (3-5)
Continuation of 519. See 519 for description.

521 Graduate Reading in Latin Literature (3-5)
Continuation of 519 and 520. See 519 for description.

533 Special Work in Latin Syntax (3-5)
Development of style in writing Latin prose.

540 Special Problems in Latin (2-6, max 12)
Investigation of selected phases of classical study.

FRENCH

(See Foreign Languages and Literatures)

GEOGRAPHY

The Department of Geography offers both the thesis and nonthesis M.A. degree tracks. Applicants must submit transcripts of all undergraduate work, the aptitude portion of the GRE, and three letters of recommendation for evaluation by the graduate committee. Several teaching and research associateships and scholarships are awarded each year. Applicants wishing to be considered for financial support for the academic year beginning in September should submit all application materials prior to March 1. Application deadlines for admission to the graduate program are one month prior to the quarter for which admission is requested. All financial support is allotted on a competitive basis, and most is committed in the fall. Occasionally, however, associate or scholarship support is available for students wishing to begin study during winter, spring, or summer quarter.

Geography courses which are required for both the thesis and nonthesis tracks are GEOG 577 (Quantitative Methods), GEOG 580 (Geographic Thought), GEOG 675 (Research Methods), and at least two seminars in geography.

Students pursuing the thesis track must take a minimum of nine courses, seven of which must be in geography. Hours in 504, 505, 585, and 690 are excluded from the count. Fifteen additional hours in thesis are also required. The thesis committee is made up of three faculty members from the Department of Geography (one of whom will serve as the student's advisor and thesis director), and one additional committee member may be chosen from a related discipline. Candidates for the thesis degree must successfully defend both the thesis proposal and the completed thesis before this committee.

Students selecting the nonthesis track must complete a minimum of 60 quarter hours of graduate study, 50 of which must be in geography. Hours in 504, 505, 585, and 690 are excluded from the count. The nonthesis student must develop a program of study with two of the following areas of systematic emphasis: area studies, cultural, physical, resource management, population, and urban. These systematic concentrations must be supported by at least two courses taken in one of the following techniques: cartography, remote sensing, and quantitative methods. The program of study must be approved by a committee made up of three geography faculty members. The degree is completed by passing a three-part comprehensive written exam on the chosen areas of systematic and technique emphases.

502 Meteorology (5)
General survey of physical principles of weather.

503 Climatology (5)
Exchanges of energy and moisture and their significance in the use of the earth's surface.

504 Observations in Meteorology (2)
Prereq: 502. Lab experience in acquisition and measurement of meteorological parameters.

505 Practicum in Meteorological Forecasting (2-10)
Prereq: 502, 504. Lab experience in preparation and dissemination of meteorological forecasts.

507 Synoptic Meteorology (5)
The construction and analysis of meterological models used in predicting meterological phenomena.

511 Advanced Physical Geography (5)
Application of physical geographic principles to specific research problems.

521 Population Geography (5)
Systematic survey of world population problems including distribution, composition, fertility, mortality, density, age-sex structure, and impact of these factors on world population growth and resources.

522 Settlement Geography (5)
Patterns and forms of rural settlement in terms of environmental, functional, and traditional effects.

523 Landscape and Culture (5)
Consideration of Anglo-American landscape as key to understanding Anglo-American culture and its myths (e.g., frontier) and stereotypes (e.g., individualism).

524 Industrial Location (5)
Factors in industrial location, theory, and applications in developmental planning.

525 Political Geography (5)
Systematic examination of basic approaches, topics, and spatial concepts in political geography, with case studies. Emphasis at nation-state level.

526 Urban Geography (5)
Study of internal patterns of urban areas.

527 American Rural Vernacular Architecture (5)
Consideration of temporal and spatial characteristics of American rural vernacular buildings and importance of preserving ordinary structures.

530 Western European Geography (5)
Topical and regional survey of western Europe with emphasis on region's position as integrated economic area. Specific European planning regions will form basis for discussion.

531 African Thematic Geography (5)
Systematic examination of four selected themes relevant to modern geography of Africa. Emphasis on development.

532 Africa: Regional Approaches(5)
Regional survey of the 4 major areas of tropical Africa: East, West, Equatorial, Central, and South.

535 Geography of Latin America (5)
Regional survey of Latin America with emphasis on problems of social and economic development.

538 Contemporary Southeast Asia (5)
Survey of population, food production, natural resource exploitation, energy, physical environment, and regional concept in Southeast Asia.

540 Environmental Impact Analysis (5)
Introduction to analytic techniques, legal responsibilities, and administrative procedures in evaluating environmental impacts of land use change.

544 Agricultural Ecosystems (5)
Agriculture examined from 4 viewpoints: evolution of agricultural systems, ecological analysis of traditional and modern agriculture, food and agricultural development (Third World Emphasis), and problems and prospects in North American agriculture.

546 American Conservation Movement (5)
Topical survey of schools of thought, themes, and specific issues in American conservation in past century. 19th century transcendental thinkers are baseline for survey. Contemporary environmental issues and debates provide capstone for course.

547 Resource Management (5)
Themes in American environmental history, contemporary environmentalism, methods of resource assessment and management, and selected case studies in managing renewable resources.

550 Land Use Planning (5)
Land use controls in U.S. zoning ordinance, subdivision regulation, social concerns, managed growth, land banking, homesteading, historic preservation.

553 Environmental Planning (5)
Planning in built and natural environments briefly surveying personal space, architectural space, small towns, and neighborhoods; emphasizes larger conceptual regions and nation.

555 Evolution of Planning (5)
Evolution of urban planning in U.S. during 19th and 20th centuries. Housing, parks, ideal communities, intellectual attitudes, zoning and subdivision case law, federal intervention, and present programs.

560 Cartography (5)
Introduction to basic design principles of aesthetically pleasing maps, emphasizing legibility and readability from map user's viewpoint. Map construction ranges from simple map compilation to multicolor composition and scale reduction.

561 Statistical Cartography (5)
Prereq: 560. Cartography techniques of representing quantitative data on maps.

562 Teaching Map Skills (1)
Covers basic skills in using maps and globes as tools to understand important themes in geographic education. Enables teachers to develop better teaching skills for improving classroom activities and enhances layperson's knowledge of map and globe usefulness.

565 Remote Sensing I (5)
Principles and techniques used in air-photo interpretation for geographers, geologists, military, community planners, and engineers.

566 Remote Sensing II (5)
Synoptic analysis in both visual and digital form of spatial variations in botanical, geological, and geographical phenomena.

568 Automatic Cartography (5)
Introduction to automated techniques for compiling and producing maps. Issues range from re-application of manual techniques in a computer environment to fully automated production and GIS.

571 Quantitative Methods (5)
Systematic survey of quantitative techniques employed by geographers.

575 Analysis of Geographic Systems (5)
Introduction to methods of systems analysis and modeling directed to study of regional human and environmental processes and their interaction at regional and global scales.

576 Field Methods (5-9)
Introduction to geographic field methods and techniques in rural and/or urban areas, involving field mapping and recording, spatial sampling, interviewing, coding and visual recording, field analysis, and reporting and summarizing.

578 Geographic Information Systems (5)
Practical application of GIS to problems and land-use planning, protection of agricultural land, management of natural resources, overexploitation of forests, transportation, as well as demographic data, and urban housing. Hands-on experience in making maps with computers, in digitization, storing and retrieving geographic data, and designing simple information systems.

579 Advanced Geographic Information Systems (5)
Prereq: 578. Directed readings and laboratory projects in the design, implementation, and application of GIS in the spatial sciences.

580 Geographic Thought (5)
Development of geographic concepts and philosophers from ancient to post-modern.

585 Internship (max 15)
Provides qualifying students credit for work study experience in cartography, remote sensing, land-use planning, resource management, and other fields in applied geography. Supervised by geography faculty and evaluated by on-the-job supervisor. Lengthy report summarizes experience.

593 Colloquium (1)
Colloquium with a systematic, regional, or technique emphasis in geography, using graduate students, faculty, and/or guest speaker presentations.

594 Field Problems (5)
Research on field problems using standard geographical field methods.

666 Seminar in Cartography (5)

675 Library Research and Writing (5)
Emphasis on geographic research and writing. Consideration of geography as science and scientific method. After studying techniques and style, student completes number of writing tasks including literature reviews, criticism, and research proposal.

678 Analysis of Geographical Data (5)
Prereq: 571. Students build geographical data file; analyze with descriptive and inferential statistics; use models of spatial analysis; learn CMS, languages, and packages; all directed toward description and analysis of spatial patterns.

679 Seminar: Human Geography (5)

680 Seminar: Third World Development and Environment (5)

681 Seminar in Physical Geography (5)

682 Seminar in Economic Geography (5)

682B Seminar in Political Geography (5)

683 Metropolitan Areas: Seminar in Urban Geography (5)

684A Seminar in Regional Geography: Latin America (5)

684B Seminar in Regional Geography: Southeast Asia (5)

684C Seminar in Regional Geography: Africa (5)

685 Seminar in Population Geography (5)

686 Seminar in Historical Geography (5)

687 Seminar in Geographical Technique (5)

688 Seminar in Resource Management (5)

689 Seminar in Land Use Planning (5)

690 Geographic Studies (1-5, max 5)

694 Research Project (1-15)

695 Thesis (1-15)

GEOLOGICAL SCIENCES

The Department of Geological Sciences welcomes qualified applicants who possess an undergraduate degree in geology or in an allied science field such as chemistry, physics, mathematics, biological science, or engineering. The department offers four separate M.S. degree options:

- Geology—specializations in sedimentology/stratigraphy, paleontology, structure/tectonics, geomorphology/glacial geology
- Hydrogeology
- Environmental Geology
- Geophysics—emphasis on measurement of seismic properties of rocks and seismic field methods.

All options require a minimum of eight graduate courses approved by the department and completion of a thesis. Specific course requirements depend on the option selected. For additional details on requirements, consult the publication, *Graduate Program Information Package—Geological Sciences*, available upon request from the department.

Prospective graduate students for all options should have demonstrated background in chemistry, physics, and calculus. Minimal background for students to be admitted to the geology option without deficiency includes courses in mineralogy, petrography/petrology, structural geology, sedimentology/stratigraphy, geomorphology, paleontology, and field geology. Since the graduate options in hydrogeology, environmental geology, and geophysics are designed to admit candidates with either undergraduate geology degrees or undergraduate degrees in allied sciences, the required background is flexible, and certain undergraduate geology courses may be taken for graduate credit on the assumption that a more detailed background exists in a related science.

Applications for financial aid must be received by March 1 for fall quarter admission. Students may be admitted to the program in any academic quarter, but financial aid is often NOT available for students who do not enter in fall quarter.

501 Advanced Physical Geology (5)
Prereq: perm. Designed for students with limited background in geology entering the graduate options in environmental geology, geophysics, and hydrogeology. Emphasizes those aspects of minerals, rocks, rock deformation, and surficial processes necessary to pursue a program in applied geology.
Green; F; D.

507 Geological Applications of Remote Sensing (5)
Prereq: 330, 360. Principles of interpretation and analysis of conventional aerial photograph and satellite imagery in resolution of geologic problems. 2 lec, 4 lab.
Smith; Sp; Y.

510 Rocks and Minerals (6)
Prereq: perm. Principles of crystallography and crystal chemistry, descriptive mineralogy, origin and classification of igneous sedimentary and metamorphic rocks. 4 lec, 4 lab.
Heien; D.

513 Optical Mineralogy (4)
Prereq: 320, or concurrent w/320. Optical characteristics of minerals and identification of minerals with the petrographic microscope. 2 lec, 4 lab.
Heien; F; Y.

522 Igneous and Metamorphic Petrology/Petrography (4)
Prereq: 413. Petrogenesis of igneous and metamorphic rocks and their identification in thin section. 2 lec, 4 lab.
Heien; Sp; Y.

524 Sedimentary Petrology/Petrography (3)
Prereq: 350, 413. Petrogenesis of sedimentary rocks and their description and classification in hand specimen and thin section.
Kidder; W; Y.

525 Diagenesis (5)
Prereq: 524. Critical view of diagenetic principles using numerous examples. Many topics are selected from recent journal articles. Students read, present, and discuss current literature, as well as writing a term paper. 4 lec.
Kidder; Sp; A.

526 Principles of Geochemistry (5)
Prereq: 320. Low-temperature solution geochemistry and equilibrium, Eh-pH relationships, applications of thermodynamics to geologic systems, introduction to isotope geochemistry. 4 lec.
Heien; Sp; A.

530 Principles of Geomorphology (5)
Basic concepts of origin and development of land forms. Laboratory study of topographic maps and aerial photographs. Can be taken for graduate credit by students in hydrogeology and geophysics options only. 4 lec, 2 lab.
Smith; W; Y.

532 Origin and Classification of Soils (5)
Prereq: 330. Concept of soil and factors of soil formation, introduction to soil morphology and systems of soil classification, discussion of major soil groups of world and soils of Ohio. 3 lec, 2 lab, field work.
Smith; F; A.

537 Depositional Environments (5)
Prereq: 550. Advanced coverage of depositional processes and environments. Latter part of course focuses on global sedimentation and events. Students read, present, and discuss current literature, as well as writing a term paper. 4 lec.
Kidder; Sp; A.

538 Glacial Geology (5)
Prereq: 330. Formation and behavior of glaciers, past and present; glacial processes and causes and implications of ice ages. 3 lec, 2 lab, field trips.
Smith; F; A.

543 Advanced Invertebrate Paleontology (6)
Prereq: 340. Evolutionary trends, geologic history, selected index genera and faunas, and modern methods in study of invertebrate fossils. 3 lec, 4 lab.
Mapes: W; Y.

550 Stratigraphy—Sedimentology (4)
Prereq: 320. Introduction to principles and processes relating to origin of stratified rocks and conventions of their classification and description. Field methods and field trips with emphasis on depositional environments. 4 lec, 2 lab.
Kidder; Sp; Y.

556 Earth Systems Evolution (4)
Prereq: 320, PHYS 201. Synthesis of the coupled histories of the earth's interior, surface, and life. 3 lec, 2 lab.
Worsley: W; Y.

560 Structural Geology (5)
Prereq: 320. Principles of rock deformation and interpretation of folding and faulting and related topics. Stress and strain: their application and derivation in natural structures. Field-oriented structural problems, structural maps, and use of stereographic projections. 3 lec, 2 lab, field work.
Nance; F; Y.

562 Geodynamics: The Earth's Interior (4)
Prereq: 320. Structure of earth's interior and plate tectonics. Solid earth geophysics: gravity, magnetics, heat flow, velocity structure and seismicity. 4 lec.
Green; Sp; Y.

564 Regional Tectonics (5)
Prereq: 360. Global tectonics and structure of continental cratons and margins, mid-ocean ridges, island arcs, and major orogenic belts. 4 lec.
Nance: W; A.

565 Basin Tectonics and Hydrocarbon Exploration (6)
Prereq: perm. An examination of the tectonics, structural style, and hydrocarbon potential of sedimentary basins, their role in the exploration of petroleum provinces, and their appearance and interpretation on conventional exploration data.
Nance; F; Y.

569A Earth Science for Teachers (5)
Seminars, laboratory work, and field trips dealing with topics in the earth sciences. Controversial subjects such as global warming, destruction of natural habitats, and evolution discussed. Goals include understanding process of science and limitations of scientific inquiry.
Mapes: Su; D.

569B Classroom Applications in Earth Science (1)
Prereq: 569A concurrent. Examines selected fundamental problems in earth science and the development of hypotheses and theories. Reports detailing adaptation of topics in earth science to classroom lessons are written and presented.
Mapes: Su; D.

570 Mineral Deposits (5)
Prereq: 320. Geologic and geochemical processes by which mineral deposits form and their relationship to plate tectonics. 4 lec.
Heien; Sp; A.

576 Subsurface Methods (5)
Prereq: PHYS 202 or 253. Drilling practices, drill stem test, electric, sonic, and radioactivity logging applied to subsurface exploration. 3 lec, 2 lab.
Ahmad. W; Y.

580 Hydrogeology I (5)
Prereq: MATH 163B or 263B, PHYS 202 or 253, CHEM 123 or 153. Principles governing occurrence, movement, and recovery of water in soil and aquifers, water budget, water pollution, water chemistry. 3 lec, 2 lab.
Ahmad F; Y.

581 Hydrogeology II (5)
Prereq. 580. Design of well construction and well fields. Pumping tests, analysis, interference. Study of groundwater basins. 3 lec, 2 lab.
Ahmad: W; Y.

582 Theory of Groundwater Motion (5)
Prereq 581, MATH 340. Basic principles and fundamental equations; D.E. of groundwater motion, solution of boundary value problems for different types of aquifer. Analytical and numerical methods in subsurface hydrology with emphasis on finite difference method; digital model. 4 lec.
Ahmad; Sp; Y.

583 Field Hydrology (6)
Prereq: water resources background. Field training in techniques of hydrology and water resouces evaluation.
Ahmad; Su; Y.

585 Introduction to Applied Geophysics (5)
Prereq: PHYS 202 or 253. Introductory course in environmental and geotechnical geophysics. Survey of applied geophysical methods including seismic, gravity, magnetic, electrical, and electromagnetic techniques. 3 lec, 2 lab.
Green; F; Y.

586 Applied Seismology (4)
Prereq: 585. Field methods and analysis techniques for seismic characterization of shallow subsurface, multichannel digital data acquisition, generalized reciprocal refraction, and common offset reflection techniques as practiced in environmental and geotechnical indusries.
Green; Sp; Y.

621 Advanced Metamorphic Petrography (4)
Prereq: 413. Petrogenesis of metamorphic rocks and their description and classification in hand specimen and thin section. 2 lec, 2 lab.
Nance; Sp; A.

661 Advanced Structural Geology (5)
Prereq: 360. Deformation, stress, and strain: their application and derivation in natural structures. Regional structural associations and geometric analysis. 4 lec, 2 lab.
Nance; W; A.

690 Advanced Seminar in Geology (1-2)
Prereq: perm. Intensive study of selected geologic topics by special groups. (Several seminars may be held concurrently.)
Staff; F, W, Sp, Su; Y.

691 Geologic Studies (1-6, max 12)
Prereq: perm. Individual or small group independent study arranged with faculty members.
Staff; F, W, Sp, Su; Y.

693 Research in Geology (1-3, max 6)
Staff; F, W, Sp, Su; Y.

695 Thesis (1-15)
Staff; F, W, Sp, Su; Y.

GERMAN

(See Foreign Languages and Literatures)

GOVERNMENT

(See Political Science)

GREEK

(See Foreign Languages and Literatures)

HEALTH AND HUMAN SERVICES

See Health and Sport Sciences; Hearing and Speech Sciences; and Human and Consumer Sciences)

509 Microcomputer Applications in Health Sciences (4)
Prereq: Health and Human Services major or perm. Provides students with knowledge of and experience with microcomputer-based programs in word processing, data base management, and spreadsheet applications to solve problems often encountered in health-related areas. No credit awarded if CS 120 or MIS 100 or HS 309 have been taken at the undergraduate level.
Staff; F, W, Sp, Su; Y.

Gerontology Certificate Program

The College of Health and Human Services sponsors a Gerontology Certificate Program for graduate students in any major program within the University who wish to gain knowledge and skills related to working with the elderly. The Gerontology Certificate is also appropriate for students planning to continue doctoral preparation in gerontology or related areas. Upon completion of degree requirements, the Gerontology Certificate is awarded and notification of the award is officially recognized on the student's transcript upon graduation.

Program Requirements: Students are required to complete at least 23 credit hours from the following list of courses, including an approved practicum (HLTH 650, 3-5 hours). In addition, students are required to complete HLTH 613, Aging and Health.

and at least one course in the Psycho-Social Area and one in the Biological/Health-Related Area. Elective course selections and practicum placement will be made by students and their advisors in consultation with the Director, Gerontology Certificate Program.

Required:

HLTH	613 Aging and Health (3)
HLTH	650 Practicum (3-5)

Select one course from Psycho-Social and one from Biological/Health-Related:

Psycho-Social:

EDCE 638	Gerontogical Counseling (3)
HECF 562F	The Aged Family (2)
HECF 580	Death and Dying (4)
HECF 589	Self, Aging, and Society (4)
PHIL 660	Thinking About Death (4)
PSY 674	Psychological Aspects of Aging (4)

Biological/Health-Related:

HLTH 605	Public Health and Aging
HSS 600	Communicatively Impaired Elderly Patient: Clinical Assessment and Intervention (4)

Student requests for substitutions must receive prior approval by the Director, Gerontology Certificate Program.

Application Process: Admission may be granted in any quarter for students accepted into a graduate degree program. An application form is to be filed with the Director, Gerontology Certificate Program.

HEALTH AND SPORT SCIENCES

- **Athletic Training (HSAT)**
- **Exercise Physiology (HEXP)**
- **Graduate Sport Sciences (HSSC)**
- **Health Sciences (HLTH)**
- **Industrial Hygiene (IH)**
- **Physical Education and Sport Sciences (HPES)**
- **Recreation Studies (HREC)**
- **Sports Administration (HSAD)**

The School of Health and Sport Sciences offers programs leading to the Master of Science in Physical Education, Master of Science in Physiology of Exercise, Master of Health Administration, and Master of Sports Administration.

MASTER OF SCIENCE IN PHYSICAL EDUCATION

Within the program leading to the Master of Science in Physical Education, the student has the opportunity to develop a concentration in one of the following areas: athletic administration, athletic training, foundations of coaching and teaching, physical education, recreation studies, and sport physiology and adult fitness.

Students meeting the following requirements will be considered for unconditional admission:

- A bachelor's degree from an accredited college or university
- A minimum overall grade point average (g.p.a.) of 2.7 on a 4.0 scale
- A minimum of 36 quarter hours of appropriate undergraduate coursework in the selected area of study

If a student fails to meet the above standards, the candidate may be admitted on a conditional basis. Students admitted conditionally will be informed of what conditions would have to be met, including submission of Graduate Record Examination (GRE) or Miller Analogies Test (MAT) scores if their g.p.a. is below 2.7, prior to being accepted unconditionally. Conditions may also include taking a prescribed number of courses which may or may not be taken for graduate credit. Students may be able to take these prescribed courses concurrently with their graduate program of study. However, candidates admitted on a conditional basis are not eligible for financial assistance.

Full and partial associateships are available, as well as tuition scholarships. Awards are made to the limit of available funds. While applications for admission are accepted during all quarters, it is recommended that both applications for admission and for financial aid for the following year be received by April 1. Students should submit their applications at least six weeks prior to the desired entrance date.

All programs of study are planned by the student and his or her advisor, taking into consideration the undergraduate preparation and the professional goals of the student. Requirements vary, depending upon the area of concentration and whether the student selects the thesis (minimum of 45 hours) or nonthesis (minimum of 50 hours) option. The thesis option requires 39 hours of coursework and six hours of thesis. All students must complete a research class and maintain a 3.0 g.p.a. The concentration requirements are:

Athletic Administration:

HPES 601	Contemporary Issues (4)
HPES 606	Organization & Administration of Physical Education & Sport (5)
HPES 642	Ethics in Sports (3)
HPES 650	Practicum (1-5)
OR HSSC 650	Practicum (1-5)
HPES 691	Seminar (4)
HS 509	Microcomputer Applications (4) (if no equivalent course taken at undergraduate level)
HSAD 610	Athletic Administration Seminar (3)
OR HSAD 607	Problems of Competitive Athletics
HSSC 601	Seminar on International Sports (3)
HSSC 624	The Legal Aspects of Athletics, Athletic Injuries, & Recreation (2)

Athletic Training:

HSAT 610	Orthopedic Assessment (2)
HSAT 620	Therapeutic Exercise (3)
HSAT 625	Therapeutic Modalities (3)
HSAT 630	Injury Prevention Techniques (3)
HSAT 635	Sports Medicine Problems (3)
HSAT 651	Medical Aspects (3)
HSAT 691	Seminar (4)

In addition, students must serve 1,800 clinical hours

Foundations of Coaching & Teaching:

HPES 601	Contemporary Issues (4)
HPES 612	Applied Biomechanics of Sport & Physical Activity (4)
HPES 640	Analyzing Performance in Physical Education (3)
HPES 642	Ethics in Sports (3)
HPES 650	Practicum (1-5)
OR HSSC 650	Practicum (1-5)
HPES 686	Motor Performance of Exceptional Children (4)
HPES 691	Seminar (4)
HSSC 601	Seminar on International Sports (3)
HSSC 624	The Legal Aspects of Athletics, Athletic Injuries, & Recreation (2)
HSSC 655	Psychology of Coaching (3)

Physical Education:

HPES 691	Seminar (4)

Recreation Studies:

HPES 609	Advanced Tests & Measurements (4)
HREC 601	Contemporary Issues (4)
HREC 649	Administration of Community Recreation (4)
HREC 650	Practicum (1-5)
HREC 675	Adventure Programming (3)
HREC 691	Seminar (4)

Sport Physiology & Adult Fitness:

HEFN 660	Sport Nutrition (3)
HEXP 514	Physiology of Exercise (4)
HEXP 515	Physiology of Exercise Lab (3)
HEXP 558	Cardiovascular Evaluation (4)
HEXP 616	Sports Physiology & Adult Fitness (4)
HEXP 617	Exercise Prescription (3)
HEXP 661	Internship (5-15)
HPES 609	Advanced Tests & Measurements (4)
HS 509	Microcomputer Applications (4) (if no equivalent course taken at undergraduate level)

MASTER OF SCIENCE IN PHYSIOLOGY OF EXERCISE

The Master of Science in Physiology of Exercise is a two-year program that requires the completion of a master's thesis. Admission to the graduate program in exercise physiology requires a bachelor's degree from an accredited institution, with a strong background in the biological sciences including organic chemistry, physics, calculus, human anatomy, and human physiology. Students also should have a minimum overall grade-point average of 2.7 (on a 4.0 scale). In addition, applicants must submit scores for the Graduate Record Examination (GRE).

While applications for admission are accepted during all quarters, it is recommended that both applications for admission and for financial aid for the following year be received by April 1. Students should submit their completed application six weeks prior to the desired entrance date.

Students must complete 45 quarter hours, with at least 39 being in formal courses and seminars.

Required Courses:

HPES 691	Seminar
HSSC 695	Thesis

Recommended Courses Include:

BIOS 563	Cell Chemistry (4)
OR CHEM 589	Basic Biochemistry (5)
OR CHEM 591 & 592	Intro to Biochemistry (8)
BIOS 654	Physiology of Work & Fatigue (3)
BIOS 670	Biostatistics I (5)
OR EDRE 720	Educational Statistics (5)
OR ISE 504	Applied Engineering Statistics (3)
BIOS 682I	Physiology Processes of Mammals (1-3)
BIOS 682S	Advanced Human Anatomy (1-3)
HEXP 514	Physiology of Exercise (4)
HEXP 515	Physiology of Exercise Lab (3)

It is anticipated that the second year of graduate study will involve primarily thesis research and writing, supplemented by necessary required courses and some electives.

MASTER OF HEALTH ADMINISTRATION

The Health Administration Program consists of four different concentrations: Acute Care Administration, Long-Term Care Administration, Community Health, and Health Promotion. The Ohio Board of Examiners of Nursing Home Administrators has approved the Health Administration Program, Long-Term Care Administration concentration as meeting the academic and experiential prerequisites for admission to the licensure examination.

Admission to the program is on a competitive basis. Minimum criteria candidates must meet to be considered for selection are:

- Earned bachelor's degree from an accredited institution (or indication that degree will be completed prior to beginning graduate program)
- Overall undergraduate g.p.a. of 2.8 on a 4.0 scale
- Graduate Management Admission Test (GMAT) score of 450

Applicants must submit the following documentation:

- Application
- Three letters of recommendation
- Personal essay identifying career goals and objectives
- GMAT scores
- Official transcript(s) of all undergraduate work

Upon receipt of all of the above information, applicants will be contacted to schedule either an on-campus or phone interview. All applicants for fall quarter must have submitted all documentation and completed their interviews by June 1. Admission for other quarters is limited to part-time students, and applicants must have completed the application process by September 1 for winter quarter and December 1 for spring quarter. Full and partial associateships are available, as well as tuition scholarships. Awards are made to the limit of available funds.

The minimum hour requirement for the master's degree is 88 hours including the following core courses:

- PSY 520 Elementary Statistics (5)
- MGT 500 Management (4)
- ACCT 501 Accounting Principles (4)
- INCO 610 Theories of Communication (5)

NOTE: Students who have completed equivalent courses at the undergraduate level with at least a grade of B (3.0) will not have to take the courses at the graduate level, and the hours needed for graduation will be reduced accordingly.

Foundation Courses Required for All Majors:

HLTH 603	Administration of Health Organizations (4)
HLTH 615	Human Resource Management Within Health Care (4)
HLTH 620	Bioethics in Health Care Administration (4)
HLTH 621	Health Care Finance (4)
HLTH 630	Epidemiology in Health Planning (4)
HLTH 691	Seminar (4)
HLTH 698	Needs Assessment & Program Evaluation (5)

Specific Concentration Requirements:

Acute Care Administration:

HLTH 612	Management Applications (5)
HLTH 622	Health Care Reimbursement (4)
HLTH 623	Management in Acute Care Facilities (4)
HLTH 692	Comprehensive Health Planning (4)
HLTH 697	Thesis (1-8)
OR HLTH 699	Internship (15)

Community Health:

EDCE 525	Foundation of Rehabilitation Counseling (4)
EDCE 685	Multicultural Education (4)
HLTH 624	Community Health Programs (4)
HLTH 607	Health Promotion & Health Behavior (4)
HLTH 697	Thesis (1-8)
OR HLTH 699	Internship (15)
INCO 510	Cross-Cultural Communication (4)

Health Promotion:

HEFN 660	Nutrition for Sports & Fitness (3)
HEXP 616	Intro Sport Physiology & Adult Fitness (4)
HLTH 518A	Instructional Experience (1-8)
HLTH 530	Worksite Health Promotion (4)
HLTH 607	Health Promotion & Health Behavior (4)
HLTH 697	Thesis (1-8)
OR HLTH 699	Internship (15)

Long-Term Care Administration:

HLTH 605	Public Health & Aging (4)
HLTH 612	Management Applications in Health Care (5)
HLTH 613	Aging & Health (4)
HLTH 622	Health Care Reimbursement (4)
HLTH 640	Administration of Long-Term Care Facilities (4)
HLTH 692	Comprehensive Health Planning (4)
HLTH 697	Thesis (1-8)
OR HLTH 699	Internship (15)

Electives may be chosen from courses offered by a variety of disciplines to complete each student's individual interests. These courses will be selected and included in each student's plan of study in consultation with the student's advisory committee.

MASTER OF SPORTS ADMINISTRATION

The Sports Administration/Facility Management program requires completion of 50 quarter hours in no less than three academic quarters in residence at Ohio University. While each candidate's curriculum is unique, most majors concentrate their studies in business, communication, journalism, management, marketing, and sports administration. The student's program of study is developed for and by the individual in consultation with an advisor. The program consists of two required courses:

HSAD 607	Problems of Competitive Athletics (3)
HSAD 691	Seminar (4)

The remaining hours are selected by the student in consultation with his or her advisor. In addition, each student must complete an internship (HSAD 660) worth five hours of credit, lasting from 3 to 12 months, depending on the desires of the host organization. Total hour requirement for the M.S.A. degree is 55.

An undergraduate major in communication, business administration, journalism, physical education, or recreation is desirable, but not mandatory. Work experience and participation in athletic-related positions are advantageous to the prospective student. Specific admission requirements to the Sports Administration/Facility Management Program are:

- A bachelor's degree from an accredited college or university
- An overall undergraduate grade-point average of 2.7 on a 4.0 grading scale
- Minimum Graduate Record Exam (GRE) test scores of 480 in verbal and 410 in quantitative
  OR Miller Analogies Test (MAT) score of 45
  OR GMAT score of 450
- Three letters of recommendation including one from an individual who can attest to the student's qualifications in chosen field of endeavor (i.e., athletic director, arena manager, etc.)
- Two-page autobiography which includes information about the student's background, experience, involvement in sports, and/or related associations.

As a final phase in the selection process, applicants meeting the admissions standards are invited, at their own expense, to Ohio University for interviews. The final selection of students will be based on the applicants' overall qualifications, including relevant experience and personal presentation during the interview.

All applications for June admission must be received by March 1 and for September admission by April 1. A completed application consists of an official undergraduate transcript, application form, test scores, two-page autobiography, and three letters of recommendation. Partial submission of these requested materials will not be considered a completed application.

• Athletic Training (HSAT)

600 Guided Independent Study (1-2, max 2)
Prereq: grad major/minor. Selected areas of study with written report based on research.
Staff; F, W, Sp, Su; Y.

610 Orthopedic Assessment (2)
Prereq: perm. Methods of objective evaluations of effects of neuromuscular impairment injuries and measurement of changes in neuromuscular functioning.
Vosler; F; Y.

611 Special Problems (1-6)
Prereq: perm. Individual research and experimentation of professional issues. Identifies pertinent problems and plans potential solutions.
Lavery; F, W, Sp, Su; Y.

620 Therapeutic Exercise: Theory and Application (3)
Prereq: perm. Advanced techniques in prevention, management, and rehabilitation of athletic injuries.
Staff; W; Y.

625 Therapeutic Modalities: Theory and Application (3)
Prereq: perm. Advanced techniques in the principles and practical skills of therapeutic modalities.
Staff; Sp; Y.

630 Injury Prevention Techniques in Sports Medicine (3)
Prereq: perm. In-depth study of evaluating and developing conditioning techniques and programs for prevention of athletic injuries.
Vosler; W; Y.

635 Seminar in Sports Medicine Problems (3)
Prereq: perm. Thorough examination of problems that exist in sports medicine as reviewed by various allied health professions.
Vosler; Sp; Y.

650 Practicum (1-5, max 10)
Prereq: perm. Supervised work experience in various aspects of administration and operation of athletic training programs.
Lavery; F, W, Sp, Su; Y.

651 Medical Aspects (3)
Prereq: perm. The study of functional and structural changes in tissues and organs caused by athletic injury.
Carin; F; Y.

691 Seminar (4)
Prereq: grad major/minor. Research and investigation in athletic training. Topics and problems suitable for thesis writing, methods of research, writing practice, and critical analysis of outlines for research study.
Wilkinson, F; Y.

• Exercise Physiology (HEXP)

514 Physiology of Exercise (4)
Fundamental concepts describing reaction of organ systems to exercise, study of work produced by muscle. Special areas include sport conditioning, muscular fatigue, physiology, and nutrition in exercise; weight control and exercise; physical fitness; exercise and environmental stresses, review of recent research in exercise physiology and human performance.
Hagerman; F, Sp; Y.

515 Physiology of Exercise Laboratory (3)
Prereq: BIOS/ZOOL 345 or perm. Lab experience to complement material covered in 514. Grad students must take 514 and 515 concurrently.
Staff; F, Sp; Y.

558 Topics in Cardiovascular Evaluation (3)
Prereq: 514/515/516 or BIOS/ZOOL 545/546. In-depth lecture in electrocardiography, as well as other noninvasive techniques used in assessing cardiovascular function.
Murray; W; Y.

600 Guided Independent Study (1-2, max 2)
Prereq: grad major/minor. Selected areas of study with written report based on research.
Staff; F, W, Sp, Su; Y.

611 Special Problems (1-6)
Prereq: perm. Individual research and experimentation of professional issues. Identifies pertinent problems and plans potential solutions.
Lavery; F, W, Sp, Su; Y.

616 Introduction to Sports Physiology and Adult Fitness (4)
Prereq: perm. Introduction to a common body of knowledge related to sports physiology and exercise leadership. Emphasis on graded exercise stress test administration, basic electrocardiography, and laboratory physical performance tests.
Murray; F; Y.

617 Principles of Exercise Prescription (3)
Prereq: 516. Study of the underlying principles regarding the prescription of exercise to not only the healthy individual but the sedentary as well as the diseased individual.
Murray; W; Y.

650 Practicum (1-5, max 10)
Prereq: perm. Supervised work experience in various aspects of administration and operation of sports physiology and cardiac rehabilitation programs.
Lavery; F, W, Sp, Su; Y.

661 Internship in Sport Physiology and Adult Fitness (5-15)
Prereq: grad student in sports physiology & adult fitness. Supervised professional work experience in affiliated sports physiology or clinical sites with the opportunity to serve in the dual capacity of exercise technician and/or exercise leader. Internships will be a minimum of ten weeks and structured/designed to meet the interests of the student.
Murray; Su; Y.

691 Seminar (4)
Prereq: grad major/minor. Research and investigation in exercise physiology. Topics and problems suitable for thesis writing, methods of research, writing practice, and critical analysis of outlines for research study.
Simon; W; Y.

695 Thesis (1-15)
Staff; F, W, Sp, Su; Y.

• Graduate Sport Sciences (HSSC)

508 The Black Athlete and American Sport (3)
Explores origins of black athlete's participation in American sport and examines role of black men and women in growth of American sport and physical activity during 19th and 20th centuries.
Cook; Y.

511 The Olympic Movement (3)
Study of origin and development of games from Greek era to modern period. Meaning of Olympism in relation to contemporary summer and winter Olympiads explored.
Cook; Y.

600 Guided Independent Study (1-2, max 2)
Prereq: grad major/minor. Selected areas of study with written report based on research.
Staff; F, W, Sp, Su; Y.

601 Seminar on International Sport (3)
Reviews selected physical education and sport programs in various countries and discusses issues and problems related to international sport competition.
Cook; Y.

611 Special Problems (1-6)
Prereq: perm. Individual research and experimentation of professional issues. Identifies pertinent problems and plans potential solutions.
Staff; F, W, Sp, Su; Y.

624 The Legal Aspects of Athletics, Athletic Injuries, and Recreation (2)
Legal approach to athletics, athletic injuries, and physical education as studied through investigation of concepts and principles which provide legal framework within which courts view cases bearing on athletics, athletic injuries, physical education, and recreation.
Higgins; W; Y.

650 Practicum (1-5, max 10)
Prereq: perm. Supervised work experience in various aspects of administration and operation of intercollegiate and interscholastic programs.
Lavery; F, W, Sp, Su; Y.

655 Psychology of Coaching (3)
Analysis of psychological factors and principles with special reference to emotional, attitudinal, and personality problems of athletes.
Higgins; Sp, Su; Y.

691 Seminar (4)
Prereq: grad major/minor. Research and investigation in physical education, sport sciences, and recreation. Topics and problems suitable for thesis writing, methods of research, writing practice, and critical analysis of outlines for research study.
Simon, Bullard: W, Su; Y.

695 Thesis (1-15)
Staff: F, W, Sp, Su; Y.

• Health Sciences (HLTH)

518A Instructional Experiences (1-15)
Supervised practice in organizing and teaching activities in college and health related settings.
Staff: F, W, Sp, Su; Y.

527 Health of Women (4)
Health needs and concerns of women within the physical, mental-emotional, and social dimensions of functioning are examined. Emphasis on women as health care and product consumers.
Staff: F, W, Sp; Y.

530 Worksite Health Promotion (4)
Examination of worksite health promotion programs. Guidelines for development of health promotion programs in corporate settings discussed.
Staff: Sp; Y.

595 School Health Problems (5)
Prereq: grad major/minor. Organization and administration of school health programs including school and community relationships.
Staff: F; Y.

600 Guided Independent Study (1-2, max 2)
Prereq: grad major/minor. Selected areas of study with written report based on research.
Staff: F, W, Sp, Su; Y.

603 Administration of Health Organizations (4)
Prereq: MGT 500. Structure, organization, and function of contemporary health care delivery systems with emphasis on rural health services components, changing characteristics, and interrelationships with implications for future.
Staff: F; Y.

605 Public Health and Aging (4)
Critical assessment of the social, behavioral, and health research on the aging population with a concern for improving the elderly's quality of life.
Staff: F; Y.

607 Health Promotion and Health Behavior (4)
Theory and application of health promotion/education planning, implementation, and evaluation by health professions in a variety of settings. Emphasis on research related to determinants of health behavior, plus strategies and techniques used by professionals to enhance human health.
Staff: F; Y.

611 Special Problems (1-6)
Prereq: perm. Individual research and experimentation of professional issues. Identifies pertinent problems and plans potential solutions.
Staff: F, W, Sp, Su; Y.

612 Management Applications in Health Care (4)
Prereq: 603. Integration of various elements of medical care and aspects of health services administration with concentration on human resources management in health administration, labor relations, medical care appraisal, quality assurance, and application of administrative skills and concepts.
Staff: W; Y.

613 Aging and Health (4)
Theories of aging involving changes in structure and performance presented. Emphasis on normal aging changes, positive mental health and aging, health promotion and maintenance of wellness, and community health.
Staff: Sp; Y.

615 Human Resource Management Within Health Care (4)
Practical aspects of human resource management within various health care settings. Helps prepare students to handle human resource management and development issues.
Staff.

620 Bioethics in Health Care (4)
Examines social, cultural, and environmental influences that determine or impact on how persons define health problems, participate in health maintenance programs, and use medical and other health services.
Staff: F; Y.

621 Health Care Finance (4)
Prereq: ACCT 501. Explores the various financial administration processes within the various delivery systems and permits construction of the many financial reports.
Staff: F; Y.

622 Health Care Reimbursement (4)
Examines each of the payment systems in effect within each of the major groupings of health care delivery systems, e.g., hospitals, nursing homes, home health programs, and so forth.
Staff: W; Y.

623 Management in Acute Care Facilities (4)
Prereq: MGT 500. Examines the administrative problems that are unique to the delivery of health care in acute care systems. Primary focus on hospital administration.
Staff: Sp; Y.

624 Community Health Programs (4)
Institutional framework and activities of various agencies promoting and maintaining health of people of community, state, and nation.
Staff: W; Y.

630 Epidemiology in Health Planning (4)
Prereq: perm. Constructs rational basis for setting priorities and allocating scarce health care resources. Examines ways in which methodologically sound health statistics can be introduced into practical arena of planning health services.
Staff: Sp; Y.

640 Administration of Long-Term Care Facilities (4)
Overview of basic operational components and general administrative functions encountered in the management of nursing homes and other long-term care facilities.
Staff: W; Y.

650 Practicum (1-5, max 10)
Prereq: perm. Supervised work experience in various aspects of administration and operation of health and health-related programs.
Lavery: F, W, Sp, Su; Y.

690 Independent Study (1-6, max 6)
Prereq: perm of health services administration advisor. Advanced individual creative and scholarly work in health services administration and closely related fields.
Staff: F, W, Sp, Su; Y.

691 Seminar (4)
Prereq: grad major/minor. Research and investigation in health and health care. Topics and problems suitable for thesis writing, methods of research, writing practice, and critical analysis of outlines for research study.
Staff: W; Y.

692 Comprehensive Health Planning (4)
Prereq: 630, 691. Techniques and methods essential for planning with emphasis on application in social technical systems and special emphasis on planning in rural health care delivery systems.
Staff: W; Y.

693 Special Topics Seminars (1-3, max 5)
Prereq: perm. Selected topics not covered in regular offerings in health administration and closely related fields.
Staff: F, W, Sp, Su; D.

697 Thesis (1-5, max 8)
Prereq: completion of course requirements and perm. Application of principles and practices to selected problems of study in the field.
Staff: F, W, Sp, Su; Y.

698 Program Evaluation and Assessment in Health Care (5)
Prereq: PSY 520. Application of socio-behavioral research design and methodology to selected health administration topics and analysis of component of program evaluation. Quality assurance law, audits, PSRO, and accreditation standards studied.
Staff: W; Y.

699 Administrative Internship (15)
Prereq: completion of 60 credit hrs and perm. Application of skills and principles of health administration within selected institutions or agencies facilitated in this residency program.
Staff: F, W, Sp, Su; Y.

• Industrial Hygiene (IH)

500 Industrial Hygiene Sampling and Analysis (5)
Prereq: perm. Lectures and lab to introduce field sampling and lab instrumentation and analytical methods common to industrial hygiene. Students are required to interpret readings, analyze samples, and prepare appropriate reports.
Houk.

501 Hazardous Materials in the Workplace (4)
Prereq: perm. Lectures on gases, vapors, dusts, liquids, and solids and their physical and chemical characteristics. Emphasis on sampling, evaluation, and control methods. Technical reports required, including design requirements as specified by regulatory agencies.
Houk; Sp.

505 Ventilation for Contaminant Control (4)
Prereq: perm. Designed to impart a working knowledge of the principles, methods, and practices of controlling worker exposure to hazardous concentrations of air contaminants and to present logical methods of design, evaluation, and maintenance of such systems.
Houk; F.

510 Physical Hazards: Evaluation and Control (4)
Prereq: perm. Designed to provide a functional knowledge of methods used to evaluate and control noise, vibration, heat, light, and other factors affecting the health and well-being of the worker.
Houk; W.

515 Introduction to Radiological Health: Evaluation and Control (5)
Prereq: perm. Introduction and overview of health effects of various sources of radiation including sources, evaluation, safety, and control factors.
Houk; Sp.

520 Hazardous Material: Management and Control (4)
Prereq: perm. Lectures on gases, vapors, dusts, liquids, and solids and their physical and chemical properties. Emphasis upon evaluation and control methods; students develop controls for specific cases and present them in technical reports.
Houk; F.

• Physical Education and Sport Sciences (HPES)

504 History and Principles of Physical Education (4)
Prereq: grad major/minor. Origins and development of physical education and sport from time of primitive people through Greeks, Romans, Germans, English, and Americans; biological, psychological, sociological, and curricular principles underlying modern physical education program.
Cook; F; Y.

585 Advanced Perceptual Motor Development in Children (3)
Seminar in field of perceptual motor development in preschool and primary grade children. Special emphasis on practical application of theory and research findings to areas of movement performance and learning readiness.
Miller.

600 Guided Independent Study (1-2, max 2)
Prereq: grad major/minor. Selected areas of study with written report based on research.
Staff; F, W, Sp, Su; Y.

601 Contemporary Issues (4)
Prereq: perm. Selected problems in sport and physical education programs; research reading, discussion, analysis, written reports.
Simon; W; Y.

606 Organization and Administration of Physical Education and Sport (5)
Prereq: grad major/minor. Theory and practice in organizing and administering various physical education, intramural, athletic, sport, and recreation programs at public school, college, and community levels.
Cook; F; Y.

609 Advanced Tests and Measurements (4)
Prereq: grad major/minor and undergraduate tests and measurement course. Review of descriptive statistics, introduction to use of computers, inferential statistics, class problems, using data collection, computer input, and statistical analysis.
Wilkinson; Sp; Y.

610 Curriculum in Physical Education (4)
Consideration of curricular trends and theories for today and for future. Construction and development of curricula for elementary, secondary, or college and university levels.
Brown; Sp; Y.

611 Special Problems (1-6)
Prereq: perm. Individual research and experimentation of professional issues. Identifies pertinent problems and plans potential solutions.
Lavery; F, W, Sp, Su; Y.

612 Applied Biomechanics of Sport and Physical Activity (4)
Prereq: kinesiology or perm. Investigation of biomechanical principles involved in the performance of selected sports and physical activity.
Bullard; F; Y.

640 Analyzing Performance in Physical Education (3)
Methods of analyzing performance problems in physical education (process of analyzing performance problems will include identification of source of problem, specifications of solutions, intervention tactics, and evaluation of behavior change).
Brown; W; Y.

642 Ethics in Sports (3)
Discussion and identification of ethical conduct in sport pertaining to prospective administrators, coaches, teachers, and officials. Focus on appropriate actions in conducting, organizing, teaching, and coaching activities.
Brown; Sp; Y.

650 Practicum (1-5, max 10)
Prereq: perm. Supervised work experience in various aspects of administration of intercollegiate and interscholastic athletics.
Lavery; F, W, Sp, Su; Y.

686 Motor Performance of the Exceptional Child (4)
Prereq: perm. Emphasizes skills and theory related to teaching physical education to children and youth who exhibit variety of handicapping conditions. Professional and advocacy responsibilities in planning and implementing psychomotor aspects of individualized education programs will be taught.
Miller; F; Y.

691 Seminar (4)
Prereq: grad major/minor. Research and investigation in physical education and sport sciences. Topics and problems suitable for thesis writing; methods of research; writing practice; and critical analysis of outlines for research study.
Staff; F, Su; Y.

695 Thesis (1-15)
Staff; F, W, Sp, Su; Y.

• Recreation Studies (HREC)

518A Instructional Experience (1-5)
Prereq: perm. Supervised practice in organizing and teaching activities in college and recreational settings.
Dingle; F, W, Sp, Su; Y.

518B-Z Special Programs in Recreation (1-15)
Prereq: perm. Courses designed to provide the recreation major or professional unique experiences and instruction in specialized topics. Courses designed as short-term, mini-courses, seminars, or specialized workshops.
Dingle; F, W, Sp, Su; Y.

560 Understanding Play (4)
Explores meaning, theories, and development of play from infancy through middle childhood.
King; Sp; Y.

600 Guided Independent Study (1-2, max 2)
Prereq: grad major/minor. Selected areas of study with written report based on research.
Staff; F, W, Sp, Su; Y.

601 Contemporary Issues (4)
Prereq: perm. Selected problems in recreation programs; research reading, discussion, analysis, written reports.
Wilkinson; W; Y.

611 Special Problems (1-6)
Prereq: perm. Individual research and experimentation of professional issues. Identifies pertinent problems and plans potential solutions.
Lavery; F, W, Sp, Su; Y.

649 Administration of Community Recreation (4)
Administration of public recreation services; programs and facilities, fiscal considerations, including grant writing; and legal considerations.
Dingle; W, Su; Y.

650 Practicum (1-5, max 10)
Prereq: perm. Supervised work experience in various aspects of administration of intercollegiate and interscholastic athletics.
Lavery; F, W, Sp, Su; Y.

675 Adventure Programming (3)
Principles and procedures involved with planning, organizing, and conducting various types of outdoor adventure activities in national/state/private facilities.
Dingle; Sp; Y.

691 Seminar (4)
Prereq: grad major/minor. Research and investigation in recreation. Topics and problems suitable for thesis writing; methods of research; writing practice; and critical analysis of outlines for research study.
Staff; F, Su; Y.

• Sports Administration (HSAD)

600 Guided Independent Study (1-2, max 2)
Prereq: grad major/minor. Selected areas of study with written report based on research.
Higgins; F, W, Sp, Su; Y.

607 Problems of Competitive Athletes (3)
Prereq: grad major/minor. Analysis of problems associated with athletic competition at all age and performance levels.
Lavery; F, Su; Y.

610 Athletic Administration Seminar (3)
Introduction to various aspects of athletic administration, responsibilities of athletic director, business manager, sports information director, athletic trainer, ticket manager, facility construction and management, security, crowd control, and facility utilization are presented and discussed.
Lavery; Sp, Su; Y.

611 Special Problems (1-6)
Prereq: perm. Individual research and experimentation of professional issues. Identifies pertinent problems and plans potential solutions.
Lavery; F, W, Sp, Su; Y.

612 Computer Applications in Sports Administration and Facility (5)
Prereq: perm. Teaches use of Qantel Computer Sports Pac, hardware, and software to solve problems and handle situations in sports administration and facility management.
Wilkinson; F, W, Su; Y.

645 Facility Management and Programming (3)
Prereq: perm. Principles and requirements related to programming and managing various types of public facilities.
Higgins; F; Y.

646 Facility Management Lab (1-2)
Prereq: 545 and perm. Supervised practical experience in the administration/operation of a special event attended by students and/or the general public.
Lavery; F, W, Sp; Y.

647 Athletic Fund Raising (3)
Prereq: perm. Techniques of fund raising to prepare individuals to assume the responsibility for programs of fund raising in different types of organizations, both public and private.
Robison; W; Y.

650 Practicum (1-5, max 10)
Prereq: perm. Supervised work experience in various aspects of administration of intercollegiate and interscholastic athletics.
Lavery; F, W, Sp, Su; Y.

660 Internship in Sports Administration (1-5)
Prereq: grad in sports administration. Supervised professional work experience in approved sports-oriented organization.
Higgins; F, W, Sp, Su; Y.

670 Financial Administration of Sport Facilities and Programs (4)
Prereq: perm. Examines financial information necessary to perform the usual duties and responsibilities associated with sports facilities and programs.
Lavery; F; Y.

691 Seminar (4)
Prereq: grad major/minor. Research and investigation in athletic administration. Topics and problems suitable for thesis writing; reviews of completed research, development of questionnaires, position papers, and evaluative instruments applicable in athletic administration.
Wilkinson; F, Su; Y.

■ HEARING AND SPEECH SCIENCES

The School of Hearing and Speech Sciences provides academic study in speech-language pathology, audiology, speech science, and combinations of these areas for students wishing to pursue clinical, research, and/or teaching careers. There are 12 full-time faculty members in the school who teach and supervise students during undergraduate and graduate coursework. Approximately 25 new master's students are accepted each year. The academic programs in speech pathology and audiology are accredited by the American Board of Examiners of the American Speech-Language and Hearing Association.

The clinical program provides a variety of experiences both on- and off-campus, culminating in a full-time externship experience for master's degree students. On-campus, clients are provided remedial and diagnostic services through the campus clinic. The clinic contains eight therapy rooms, four diagnostic and conference rooms, an audiological suite of rooms for testing, resource materials and equipment, and a complete closed-circuit television arrangement for use in observation and student supervision. Off-campus programs are carried out in regional clinics, a mental-retardation center, hospitals, rehabilitation centers, Head Start settings, private practice audiological settings, and public school settings. Virtually all of the on- and off-campus clinical supervision is carried out by the faculty and staff of the school. Many master's students participate in the on-going research activities of the faculty, and this participation frequently results in papers delivered at state and national conventions, as well as master's theses. Integrated within both the clinical and research training of students is the use of a computer lab to develop various clinical, research, and augmentative proficiencies required of practicing speech and hearing professionals today. Demonstration of such proficiency is a part of the master's and doctoral degrees for all students.

Full and partial associateships are available, as well as tuition scholarships. Awards are based on the availability of funds and student undergraduate achievements. Students interested in admission to the program should have all application materials submitted by March 15.

MASTER'S PROGRAM

Graduate majors are possible in either speech/language pathology or audiology for either a clinical or a non-clinical track. For either major, a minimum of seven quarters is needed to complete the M.A. degree. A well-planned sequence of academic coursework exists, including elective opportunities for special interest areas. Also, a thesis option may be pursued for either track.

For students in the clinical track, there is a clinical practicum requirement for each quarter culminating in a full-time off-campus clinical externship. Externships are available throughout the U.S. and Canada and are typically arranged by each student contingent upon the approval of the Clinical Director. For non-clinical track students, there is a corresponding amount of coursework focused upon the area of special interest.

To be considered for admission, students must have coursework in the areas of phonetics, speech science (acoustics of speech and hearing), normal language development, anatomy and physiology of speech and hearing, basic audiology, and aural rehabilitation. Students holding undergraduate degrees in speech and hearing may present additional coursework beyond those noted above. Students who do not present the above coursework may be admitted conditionally. However, students admitted conditionally are not eligible for financial support. After completion of the above prerequisite coursework, the student will be considered for unconditional admission which, if approved, makes him/her eligible for financial support.

Admission to the graduate program in hearing and speech sciences requires a minimum 3.0 accumulative grade-point average (on a 4.0 scale), letters of recommendation, and completion of either the Graduate Record Examination (GRE) or Miller Analogies Test (MAT). All international students having English as a second language must present TOEFL scores together with an informal tape-recorded speech sample with their application. To be considered for admission, all applicants must submit the completed application form, official transcripts of all undergraduate and/or graduate coursework, three letters of recommendation, the applicable test scores noted above, and if an international student, a taped sample of informal oral speech.

DOCTORAL PROGRAM

The Doctor of Philosophy degree provides for the acquisition of a relatively broad background in speech/language pathology, audiology, and speech/hearing sciences, permitting the student to exercise significant influence upon the coursework undertaken. Experiences in teaching, research, scholarly writing, clinical supervision, computer applications, statistical design and analysis, and independent coursework with the faculty of the school and with faculty outside the school are all available in the doctoral program.

Faculty members provide courses and conduct research in neurological speech and language disorders, phonology, fluency disorders, neuromotor disorders of speech, vibro-tactile study, clinical supervision and administration, normal language acquisition, and special computer applications. The Department of Psychology and the College of Education offer statistical research design courses, as well as providing coursework in memory, cognition, psycholinguistics, child development, and neuropsychology.

The general requirements for the doctoral degree include a minimum of 150 quarter hours of graduate credit beyond the bachelor's degree, of which 24 hours will be dissertation credit. A minimum of 54 quarter hours must be earned in hearing and speech sciences, along with two minors of 15 quarter hours each. One minor must be completed outside the school. The remaining hours may be distributed among the categories of special interest to the student. Doctoral students plan their total program together with their academic advisor. However, the final program plan is subject to the approval of the student's academic guidance committee. At the appropriate time during the course of study, following the satisfactory completion of the comprehensive examination, the student will select his or her dissertation advisor and devote the remainder of the academic effort to this research project.

To be considered for doctoral study, applicants must submit a completed application form, all academic transcripts, experience records including a brief essay on future career aspirations, three letters of recommendation, and either Graduate Record Examination (GRE) or Miller Analogies Test (MAT) scores. Applicants are encouraged to supply any additional information which he or she feels should be considered by the faculty committee reviewing the materials. Typically, doctoral students are provided stipends and tuition scholarships during their course of study.

518 Articulation Disorders (5)
Phonetic acquisition, articulation evaluation. Emphasis on practical approaches to therapy for individuals with articulation disorders.
Garber; Sp; Y.

519 Organic and Structural Communication and Related Disorders (5)
Provides a background on the nature and management of communication disorders caused by injury or malfunction of the speech and language mechanism and nervous system. Illustrations of case management are presented for selected representative cases.
Dean; Sp; Y.

522 Diagnostics (3)
Types of diagnosis in evaluation of speech and language problems. Screening tests, use of statistics in testing, basic interview and history procedures.
Garber; F; Y.

536 Speech and Hearing Disorders in the Public Schools (4)
Prereq: Not open to HSS majors. Nature, causes, treatment of speech disorders in public schools; special reference to role of classroom teacher.
Staff; D.

542 Senior Methods/Practicum
Diagnosis, planning of therapy, therapy experience in clinic facility.
Wolfolk; W, Sp; Y.

544 Disorders of Language (5)
Introduction to study of disorders of language in children. Diagnosis of problems, assessment of language abilities. Methodologies and techniques in perceptual, psychomotor, and language and speech training.
Fokes, Garber; W; Y.

570 Basic Audiology (5)
Anatomy and disorders of audition. Measurement of hearing with pure tone techniques and interpretation of results of such measurements in terms of social and educational handicap.
Isele; F; Y.

571 Aural Rehabilitation (5)
Differential diagnosis of children with suspected auditory disorders. Basic remedial procedures employed with hearing handicapped. Practice in planning lessons in speech reading and auditory training.
Christopher; W; Y.

578 Sign Language (4)
Instruction in manual sign language systems used by the deaf; vocabulary, encoding, and decoding signs for purposes of communication emphasized. (Not open to Hearing and Speech majors.)
Christopher; F, W; Y.

579 Basic Manual Communication (4)
Basic instruction and practice in fingerspelling and signing used by and for deaf and hard of hearing. (Hearing and Speech majors only.)
Christopher; F or Sp; Y.

600 The Communicatively Impaired Elderly Patient: Clinical Assessment and Intervention (4)
Clinical assessment of the communication disorders confronting elderly individuals, as well as the development of viable intervention strategies designed to enhance their rehabilitation.
Christopher; F; Y.

601 Introduction to Graduate Study
Nature and critical tasks in hearing and speech sciences. Scientific research methodology, controversial issues, and basic behavioral measurements.
Staff; W; Y.

602 Research Methods in Speech and Hearing (4)
Research methodologies and critical examination of existing research. Required of all thesis and dissertation students.
Staff; Su; Y.

603 Neurophysiology of Speech and Language (4)
Complete study of neuroanatomy with emphasis on speech, language, and auditory processes. Detailed instruction in anatomical construction of respiration, phonation, articulation, and audition as related to central nervous system. Morphological instruction with respect to central nervous system, peripheral nervous system, and autonomic nervous system is also included.
D. Fucci; F; Y.

609 Communicative Disorders in Infants and Young Children (4)
In-depth study of language intervention strategies for children exhibiting disorders of language. Areas of therapy considered include development of prelinguistic skills, pragmatic as well as semantic and grammatical aspects of comprehension and production.
Garber; F; Y.

613 Developmental and Disordered Phonology (4)
Prereq: perm. Study of phonological problems associated with overall language disorders. Emphasis on theories of phonological acquisition, stages of development, description of deviant systems, methods of data collection and analysis, and suggestions for remediation.
Fokes; W; Y.

614 Orofacial Disorders (4)
Discussion of diagnostic and rehabilitation procedures used with individuals having various orofacial disorders including cleft lip and palate.
Dean, Leach; F; Y.

617 Disorders of Fluency (4)
Stuttering related to theory, research, and therapy. Students select and develop area of interest.
Dean, Leach; Sp; Y.

619 Language Disorders in School Aged Children (4)
Prereq: 544. Study of cognitive and linguistic characteristics as well as assessment and intervention procedures for children and adolescents experiencing the following conditions: specific language impairment, traumatic brain injury, intellectual impairment, and autism. Emphasis on semantic and pragmatic considerations for an understanding of the conversational and academic problems arising from these conditions.
Garber; Sp; Y.

621 Disorders of Phonation (4)
Review of anatomy and normal physiology of vocal mechanism. Organic and functional voice problems and related therapy. Research problems in diagnosis and therapy.
Dean, Leach; F; Y.

623 Advanced Diagnostic Procedures in Speech and Language Disorders (4)
Discussion of diagnostic models; interviewing procedures, including intakes, referrals, and counseling; etiology of speech and language disorders; special evaluative techniques, standardized and informal, including speech, language, neurological, behavioral, cognitive, and motor assessments; and direct clinical experiences.
Garber; F; Y.

624 Neuromuscular Disorders of Articulation (4)
In-depth study of nature and habilitation of speech disorders or organic etiology. Primary focus on articulation disorders resulting from structural lesions, muscle uncoordination and weakness.
Dean; W; Y.

626 Language Problems of the Mentally Retarded (4)
Evaluating level of language development of trainable mentally retarded children. Techniques for assisting mentally retarded children to develop language.
Fokes, Garber; D.

627 Medical Aspects of Auditory Disorders (4)
Discussion of medical and surgical treatments for various speech and hearing disorders. Readings in medical literature and familiarization with terminology and philosophies of treatment.
Isele; Sp; Y.

629 Adult Language Disorders (4)
Aphasia, etiologies in adult aphasia, evaluation and rehabilitation of adult aphasic.
Dean, Fokes; W; Y.

630 Cerebral Palsy (3)
Cerebral palsy, etiologies, related problems; theories and procedures for habilitation.
Staff.

632 Supervision in Communication Disorders (4)
Preparation of advanced students for employment in teacher education programs and service centers. Individual assignments and specific experience in supervision of diagnostics, therapy, and research, plus administrative supervision.
Buckberry; D.

635 Practicum in Diagnosis and Therapy (1-15)
Diagnosis, planning of therapy, therapy experience. One staff meeting per week. May be repeated; however, credit beyond 3 hours must be approved.
Wolfolk; F, W, Sp, Su; Y.

635A Audiology Practicum (1-15)
Experience in audiology diagnosis and aural rehabilitation in on-campus clinical and off-campus settings. One class meeting per week plus clinical assignments. May be repeated; however, credit beyond 3 hours must be approved.
Milliken; F, W, Sp, Su; Y.

636 Clinical Externship (3-15)
Prereq: perm. Placement in off-campus clinic or other facility. Students experience all types of diagnostic or therapy during quarter under supervision of certified speech pathologist or audiologist.
Isele; F, W, Sp, Su; Y.

637 Student Teaching Seminar (3)
Prereq: concurrent with student teaching. Methods, organization, and implementation of public school speech and hearing programs.
J. Fucci; W, Sp; Y.

640 Augmentative Communication (4)
Study of the nature of augmentative communication and assistive listening systems. Development of skills in the application of augmentative communication to communication disorders in adults and children. Hands-on experience with microprocessor-based technology.
Dean; Sp; Y.

641 Dyshagia (4)
Basic knowledge of the nature of normal and deviant swallowing disorders due to neurological and structural impairments. Major topics include assessment and management of the wide range of swallowing disorders managed by the speech pathologist.
Dean; F; Y.

642 Microcomputer Applications in Communication Disorders (4)
Students become computer literate with two computer systems, knowledgeable regarding current and future applications of microcomputers in the communication disorder professions, and skilled with representative applications available in the School of Hearing and Speech Sciences.
Dean; Sp; Y.

643 Administration of Public School Speech/Language Programs (4)
Discussion of issues involving administration and implementation of speech and language programs in public school system. Identification of legislation and procedural guidelines for programming; development of administrative, diagnostic, and therapeutic strategies for schools; and discussion of teacher and parent programming. Prerequisite to student teaching.
J. Fucci; W; Y.

645 Multicultural Issues in Communicative Disorders (4)
Introduction to study of social dialects; problems and controversies surrounding this issue. Training in recognition of dialectal variations and in teaching standard English to speakers of other dialects.
Staff; Sp; Y.

652 Experimental Phonetics I (4)
Acoustic properties of speech signals and study of speech production.
D. Fucci; F; Y.

653 Experimental Phonetics II (4)
Prereq: 652. Acoustical and physiological phonetics relating to speech perception.
D. Fucci; Sp; D.

654 Calibration Instrumentation (4)
Instrumentation and procedures used in audiometric calibration.
Milliken; Su; Y.

661 Psychological Aspects of Hearing Impairment and Modes of Communication for the Aurally Handicapped (4)
Prepares audiologists/speech pathologists to better understand semantics of deafness as well as alternate modes of communication as used by those who are hearing impaired.
Christopher; F; Y.

662 Advanced Aural Rehabilitation (4)
Prepares audiologists to structure and execute programs of (re)habilitation for hearing impaired in clinical and/or educational settings.
Christopher; W; Y.

663 Pediatric/Educational Audiology (4)
Audiometric evaluation of infants and children, including BOA, COR, behavioral techniques, tests for functional loss, and auditory perceptual disorders. Audiological services in schools discussed including screening procedures, services to hearing handicapped children, working with other professionals, teachers and parents, academic programming, and administrative organization. Discussion of federal and state legislation pertaining to handicapped in schools included.
Isele, Milliken; F; Y.

664 Industrial Audiology and Hearing Conservation (4)
Provides students with essential information and skills to enable them to perform professional roles of audiologist in industrial settings and/or manage hearing conservation programs which require hearing testing of large populations.
Isele; W; Y.

672 Audiology Procedures for Speech Pathologists (4)
Discussion of methodology, procedures, interpretation of results, and application to rehabilitation procedures included to provide speech pathology students with basic understanding of various audiological procedures used in hearing evaluations with children and adults. Lab time to learn basic instrumentation and test procedures provided.
Isele; Sp; Y.

673 Audiological Assessment Differential Diagnosis (5)
Reinforces understanding of basic audiological procedures including pure tone testing, speech audiometry, masking and immittance testing. Discussion of advanced test procedures including SISI, Tone Decay, Bekesy audiometry, tests of functional hearing loss, and other differential diagnostic procedures.
Milliken; F; Y.

674 Hearing Aids (4)
Clinical hearing aid selection and counseling procedures. Lab

practice with electroacoustic measurements of aids and testing methodologies.
Isele, Milliken; F; Y.

675 Electrophysiological and Electroacoustical Measurements (5)
Electrophysiological and electroacoustical measurements applied to human hearing with emphasis on ERA and ENG.
Isele; W; Y.

676 Psychoacoustics (4)
Prereq: 6 hrs audiology above 600 level. Overview of classical and contemporary psychophysical methods, physics of sound, excitation of cochlea and auditory nerve, frequency analysis, pitch perception, nonlinear distortion, loudness, frequency, and intensity discrimination.
Staff; F; Y.

677 Bioacoustics (4)
Prereq: 6 hrs of audiology above 600 level. Ear as transducer and analyzer; electrophysiological and mechanical properties of ear.
Staff; F; Y.

678A Seminar in Audiology—Current Problems (1-4)
Current problems and areas of research. Individual reading projects and seminar reports.
Staff; F, W, Sp, Su; D.

680 Advanced Manual Communication (2)
Prereq: 579. Advanced instruction and practice in fingerspelling and signing used by and for deaf and hard of hearing.
Christopher; W, Sp; Y.

694 Directed Study and Research (1-15)
Must receive permission prior to registration; may be repeated.
Staff; F, W, Sp, Su; D.

695 Thesis (1-15)
Staff; F, W, Sp, Su; D.

712 Theories in Language Acquisition and Behavior (4)
Language and cognitive development, verbal learning, and structural properties of speech.
Staff; Sp; Y.

725 Seminar in Clinic Administration (1-4)
Prereq: perm. Organization and administration of clinical and academic programs in speech pathology and audiology.
Staff; Su; D.

731 Seminar in Speech Pathology (4-5)
Prereq: perm. Current literature and recent research, changing topic each quarter. May be repeated.
Staff; F, W, Sp, Su; D.

733 Professional Training Seminar (3-5)
Prereq: perm. Special topics, changed each offering. Development of special interest areas and innovative procedures. May be repeated.
Staff; F, W, Sp, Su; D.

755 Seminar in Speech Science (1-4)
Prereq: perm. Topics in speech science and related areas; required papers.
Staff; D.

756 Seminar in Research Problems (1-4)
Prereq: perm. Organization and preparation of research in scholarly form. Analysis and evaluation of research writing in various areas. Required application of principles to seminar projects.
Staff; F, W, Sp, Su; D.

794 Directed Study and Research (1-15)
Must receive permission prior to registration. Final product reviewed by faculty committee. May be repeated.
Staff; F, W, Sp, Su; D.

895 Dissertation (1-15, max 24)
Staff; F, W, Sp, Su; D.

HISTORY

The graduate program in history is intended to prepare students for teaching and research at the college and university level, for secondary school teaching, and for a variety of other pursuits. Each applicant is expected to have completed 24 semester hours or 36 quarter hours of undergraduate history courses. Exceptions to this requirement may be considered for applicants with outstanding undergraduate or M.A. records. Deadline for application to either the M.A. or the Ph.D. program for fall quarter admission is July 1; for financial assistance, the deadline is February 15.

MASTER'S PROGRAM

The M.A. program offers work in the following fields: United States, Modern Europe, Ancient and Medieval, Balkans and Middle East, Latin America, Africa, and Southeast and East Asia. The general requirements in the thesis program consist of eight 500-level courses, a two-quarter seminar, and an acceptable thesis. The general requirements for the nonthesis program are ten 500- level courses, plus a two-quarter seminar in which an acceptable research paper is written. No foreign language is required for admission, but students in the thesis program must demonstrate a reading proficiency in one foreign language prior to graduation. The nonthesis M.A. program is usually regarded as terminal.

DOCTORAL PROGRAM

The candidate must offer a minimum of six quarters of residence credit as a full-time equivalent student beyond the master's degree. Each candidate is required to show reading proficiency in two foreign languages; in particular cases, demonstrated proficiency in quantitative methods may be substituted for one language. He or she must complete a minor of three graduate courses in one cognate field or four courses in two cognate fields. Within the area of concentration, the candidate normally will select two fields, in one of which the dissertation will be written. He or she also will do coursework in two fields outside the area of concentration. Areas and fields are as follows:

Area One: American History: Colonial, 19th Century, 20th Century, U.S. Foreign Relations, U.S. Social-Intellectual, U.S. Economic (in cooperation with the Department of Economics).

Area Two: European: Western Europe, European Diplomatic, Tudor- Stuart England, England Since 1714, Balkans, Russia, Ancient, Medieval Europe, Renaissance, and Reformation.

Area Three: Third World: Africa, East Asia, Southeast Asia, Middle East and Mediterranean, Latin America.

For additional details as to requirements, consult the publication *Ohio University: Graduate Study in History*, available upon request from the department.

500A Colonial America to 1689 (5)
English background, establishment of settlements, first economies, evolution of political and religious structures. Relations with England, internal conflicts. Glorious Revolution.
Steiner; Y.

500B Colonial America 1689-1763 (5)
Governmental changes, credit and currency, Great Awakening, cultural developments, Old Colonial System, Anglo-French rivalry, nature of colonial society, problems of maturing political units.
Steiner; Y.

500C Revolutionary Era 1763-1789 (5)
Causes of American Revolution and struggle for independence. Confederation, movement for new government, framing of Constitution.
Steiner; Y.

502 American Indians (5)
Treats Indian society before white contact; Spanish, French, and English impact; Indian removal; Indian wars; problems of cultural contact; preservation versus assimilation; Indian society today.
Jellison; Y.

503 United States in World War II (5)
Military and diplomatic role of United States in WW II; political, economic, and social impact of war on that nation.
Fletcher; Y.

505 The United States and the Vietnam War (5)
Examines American experience in Vietnam, in terms of both military and diplomatic history of war itself and its impact on American society.
Fletcher; Y.

508A Pre-Civil War America, 1815-1850 (5)
New definitions of democracy, westward expansion, early industrialization and class formation, moral reform movements, slavery and sectionalism, Mexican War, conflict of Jacksonian Democrats and Whigs.
Field; Y.

508B The Civil War and Reconstruction (5)
Forces making for increased sectionalism in 1850s, rise of new parties, military engagements, society and institutions in North and Confederacy during wartime, attempts to restructure Southern society after war and why they failed.
Field; Y.

508C Foundations of Modern America: The Gilded Age, 1877-1901 (5)
Labor unrest, nativism and anti-semitism, imperialism, government corruption, Social Darwinism, urban growth, Victorian morality, and Indian wars examined as outgrowths of efforts of American people to adapt to modernization and industrialization in late 19th century.
Field: Y.

510A Twentieth-Century America, 1900-1928 (5)
Emphasis on political and cultural history. Major topics include early 20th-century progressivism as an intellectual movement and its manifestations in state and local politics, presidencies of Theodore Roosevelt and Woodrow Wilson, impact of WWI; ambivalent character of the 1920s in American culture and politics, origins and effects of the affluent society.
Hamby, Pach; Y.

510B Twentieth-Century America, 1928-1945 (5)
Emphasis on politics, culture, and foreign policy. Major topics include origins and nature of Great Depression; Franklin D. Roosevelt and the emergence of the modern presidency; political and intellectual character of the New Deal; origins and impact of American involvement in WWII; wartime military history, diplomacy, and politics.
Hamby, Pach; Y.

510C Twentieth-Century America, 1945-Present (5)
Emphasis on politics, culture, and foreign policy. Major topics include origins and nature of the Cold War, impact of foreign involvements on American politics, political leadership in the media age, radicalism and social change in the 60s and 70s, the rise of cultural politics and its effect on economic-based political coalitions, resurgence of conservatism in the 70s and 80s.
Hamby, Pach; Y

514 Women in American History (5)
Changing view American society has taken of role women should play and role women did play. Changing opportunities for women in education and careers. Changing legal status and political rights. Women rebels and reformers.
Jellison; Y.

514A Social and Cultural History of the United States, 1607-1820 (5)
Role of minorities, class structure, and religion in forming American society; development of American painting, architecture, music, literature, education, and science as expressions of Puritanism, Enlightenment, and nationalism.
Staff; D.

514B Social and Cultural History of the United States, 1820-1890 (5)
Role of minorities, class structure, and religion in forming American society; development of American painting, architecture, music, literature, education, and science as expressions of Romanticism, Social Darwinism, and Pragmatism.
Staff; D.

514C Social and Cultural History of the United States, 1890 to Date (5)
Role of minorities, class structure, and religion in forming American society; development of American painting, architecture, music, literature, education, and science as expressions of Pragmatism and Existentialism.
Staff; D.

514D American Social Thought to 1815 (5)
Major aspects of intellectual history of American colonies and United States to 1815, organized around two major themes: Puritanism, and secularization of American thought in 18th century.
Alexander; Y.

514E American Social Thought, 1815-1915 (5)
Major aspects of intellectual history of U.S., 1815-1890, stressing rise of romantic nationalism; triumph of democratic attitude; slavery controversy; impact of Civil War and Darwinian evolution.
Alexander; Y.

514F American Social Thought Since 1915 (5)
Major aspects of intellectual history of U.S. since 1915, with principal attention to continuing impact of evolutionary naturalism, especially in development of pragmatism; trends in Left and Right political ideologies; rise of pessimistic theology and its ramifications; modernism in arts; New Radicalism and Counter Culture.
Alexander; Y.

515A African-American History to 1865 (5)
Beginning with introduction of slavery in 1619, course deals with black person's role in America to beginning of Civil War. Concerns slavery, abolition, and many attempts by black people to improve their position.
Fletcher; Y.

515B African-American History Since 1865 (5)
Emancipation and its continuing effects on blacks in America. Life in South, migration to North, and conservative and radical attempts by black community to deal with these problems.
Fletcher; Y.

516A History of United States Foreign Relations to 1914 (5)
U.S. foreign relations from war for independence to WWI, stressing development of traditional policies—isolationism, neutrality, Monroe Doctrine—and emergence of U.S. as world power.
Gaddis, Pach; Y.

516B History of United States Foreign Relations, 1914-1945 (5)
American foreign relations in two world wars and interwar period, emphasizing shifting perceptions of vital interests involved in transition from intervention to non-entanglement to intervention again and emergence as super power.
Gaddis, Pach; Y.

516C History of United States Foreign Relations, 1945-Present (5)
American foreign relations in Cold War and after, emphasizing confrontation between U.S. and Communist world, emergence of détente, and background of current foreign policy issues.
Gaddis, Pach; Y.

517A Ohio History to 1851 (5)
Moundbuilders and Indians, Anglo-French rivalry, Revolution, territorial development, patterns of settlement, Constitution of 1802, evolution of political parties, transportation and economy, banking and currency, Constitution of 1851.
Steiner; Y.

517B Ohio History Since 1851 (5)
Slavery and restructuring of political parties; Civil War, rise of industry, politics in progressive era, Great Depression and aftermath, post-WWII Ohio.
Staff; Y.

518 American Westward Movement (5)
Role of western frontier in American development to 1890. Explorations, Indian trade, land policies, pioneer life, traders and trappers, miners, cattlemen, railroad builders, and farmers. Emphasis upon historical interpretation.
Staff; D.

519 Sports in American History (5)
Survey of evolution of organized sports in U.S., focusing on major spectator sports. Emphasis on personalities and particular events rather than sociological and psychological theorizing.
Alexander; Y.

521A History of the Military in America 1600 to 1898 (5)
Military institutions in American history: role of technology in warfare, innovations and reforms in military; war and its conduct; military and civilian society in war and peace.
Fletcher; Y.

521B History of the Military in America 1898 to Present (5)
Continuation of 521A.
Fletcher; Y.

523A Latin American History: The Colonial Era (5)
Examines historical origins of Latin American society. Themes include internal nature of Iberian and pre-Columbian Indian societies, ca. 1492; conquest and subordination of Amer-Indian civilizations by Spain and Portugal; distribution of power, land, and labor in post-conquest Latin America; order and instability in colonial society; and region's position in international economy.
Grow; Y.

523B Latin American History: The 19th Century (5)
Examines 19th century origins of modern Latin American underdevelopment, focusing on causes and consequences of Revolutions of Independence; dynamics of dictatorship and democracy in post-Independence Latin American political culture; and decision-making process by which Latin America's 19th century leaders integrated their national economies into international economic systems as specialized exporters of raw materials.
Grow; Y.

523C Latin American History: The 20th Century (5)
Survey of modern Latin American history focusing on causes and consequences of structural instability in Latin America since

1900. Emphasis on collapse of regions traditional liberal/export model of national development in the 1930s; competing political/ideological responses to structural crisis in region (social revolution, authoritarianism, democratic change); and ongoing search for viable formulas of economic development.
Grow; Y.

525 History of U.S.-Latin American Relations (5)
Survey of inter-American relations in the 19th and 20th centuries, focusing on evolving, and often conflicting, definitions of national interest which have shaped U.S. and Latin American policy orientations toward one another.
Grow; Y.

526 Dictatorship in Latin American History (5)
Focuses on predominant type of political/governmental system in Latin America: authoritarian dictatorship. After placing Latin American authoritarianism in long-range historical context of autocratic, centralized rule within region, examines major examples of 20th century ideological authoritarianism in Latin America ranging from populist authoritarianism of Juan Peron in Argentina to bureaucratic authoritarian regimes recently in power in Southern Cone and Brazil. Attention to competing schools of interpretation which attempt to explain recurring phenomenon of non-democratic forms of government in Latin America.
Grow; Y.

528 The World of Aristophanes (5)
Political, social, and cultural institutions of Greece in fifth century B.C. with special emphasis on city of Athens.
Richter; D.

529A Ancient Egypt and Mesopotamia (5)
Prehistoric eras; origin of Mediterranean civilizations; problems of ancient chronology; civilizations of Sumerians, Babylonians, Egyptians, Assyrians, Biblical Hebrews, and Persians. Stresses archaeological and literary sources, comparative social and religious concepts, acculturation, contributions to Western civilization.
Richter; Y.

529B Ancient Greece (5)
Aegean prehistory. Minoan civilization, Mycenaean Greeks, Dorian invasions, Greek Renaissance, growth of the polis, Athenian society and culture, Persian and Peloponnesian wars, political history of Greece to Alexander. Stresses archaeological sources, mythology, and drama. Hellenic contributions to Western civilization.
Richter; Y.

529C Ancient Rome (5)
Early peoples of Italy, Etruscans, constitutional development of republic, growth of empire, civil wars, history of principate to Constantine. Stresses archaeological sources, Latin literature, Roman life and institutions, Roman contributions to Western civilization.
Richter; Y.

533 Oil, Energy, and International Diplomacy (5)
Historical perspective on continuing energy crisis. Focuses attention on development of worldwide petroleum industry with particular attention to Middle East and North Africa; shows role of oil as generator of international tensions.
Doxsee; D.

534 The Arab-Israeli Dispute (5)
History of Arab-Israeli confrontation since 1890. Origins of Zionism and Arab Nationalism, impact of WWI and Peace Settlement, British Mandate for Palestine, political developments in Israel and Arab World since 1948, Great Power involvement Middle East, and recent developments in conflict betweent Israel and Arabs.
Doxsee; Y.

535 Colloquium in Middle East History (5)
Literature and source materials in Middle East since 1914; readings and reports.
Doxsee; D.

535A Middle East History to 1800 (5)
Islamic history and civilization from rise of Islam to end of 18th century. Role of prophet Muhammad, doctrines and institutional system of Islam, medieval Islamic caliphates and their cultural achievements, and contributions of Persians and Turks to Islamic civilization.
Doxsee; Y.

535B Middle East History Since 1800 (5)
History of Middle East since era of French Revolution. Disintegration of Ottoman Empire; emergence of contemporary Middle East political system; impact of nationalism, secularism, and industrialism on region; and position of Middle East in contemporary world affairs.
Doxsee; Y.

536A North Africa in Modern Times (5)
The Maghrib: its geography, ethnic composition, and history since antiquity; French conquest of Algeria, Tunisia, and Morocco; administrative systems; economic development; French-Muslim relations.
Doxsee; Y.

536B North Africa Since 1914 (5)
Rise of nationalism; struggle for political independence; political, economic, and social problems in independent North Africa; North Africa in world affairs.
Doxsee; Y.

537 Slavery 1400 to Present (5)
Slavery and slave trade from 1400 to present. Different forms of slavery compared, showing widely divergent roles of slaves, from high officials to field hands. Changes in systems through time and reasons for abolition of slavery examined. Modern forms of bondage (peonage, forced labor, child labor, prostitution, illegal immigrant labor) and activities of United Nations Working Group on Slavery discussed.
Staff; D.

538 History of West Africa (5)
History of West Africa from early times to present: peopling of sudanic and forest regions, development of trade, Islam and rise of sudanic empires, slave trade and forest states, colonial era, independence movements, problems of nationalism.
Booth; Y.

538A History of East Africa (5)
History of East Africa from early times to present, with emphasis on period since 1750. Greatest attention paid to region which comprises present-day Kenya, Uganda, and Tanzania, although neighboring countries also studied.
Staff; D.

541 Colloquium in African History (5)
Literature and source materials on Africa; readings and reports.
Booth; D.

541A Early Africa (5)
Africa in ancient world, spread of agriculture and iron working, rise of Islam, migrations of peoples, developing of states, arrival of Europeans, beginnings of slave trade.
Booth; Y.

541B Traditional Africa (5)
Africa in 17th century; slave trade, religious revolutions in western Sudan, development of African states, commercial revolution of 19th century, birth of plural society in South Africa, European partition of Africa.
Booth; Y.

541C Modern Africa 1890-Present (5)
Establishment of European rule in Africa, colonial period, rise of nationalism, decolonization and independence, problems of modern Africa.
Booth; Y.

542A South Africa to 1899 (5)
Establishment and transformation of African societies (Bantu's migrations); coming of Europeans; evolution of Cape society (black, white, colored); conflicting nationalisms; Great Trek; rise of Zulu empire and *mefcane*; mineral revolution and subjection of African chiefdoms; British imperialism and coming of South African war.
Booth; Y.

542B South Africa Since 1899 (5)
South Africa (Boer) War and reconstruction; formation of Union; global war and racial/regional/class conflicts over land, labor, and politics; rise of Afrikaner nationalism and triumph of apartheid; rise and radicalization of African nationalism; collision of nationalisms and expansion of conflict in the 1970s; South Africa and the modern world.
Booth; Y.

543 Revolutions in Southern Africa (5)
Historical background, and developments to present, of revolutions in Mozambique, Angola, Zimbabwe (Rhodesia), Namibia (South West Africa) and Azania (South Africa).
Booth; D.

544A History of the Malay World (5)
Comparative view of Southeast Asian archipelago, emphasizing Indonesian civilization after 1750. Penetration of West, struggle with imperialism and modernization, and present dilemmas.

indigenous views focus of attention.
Frederick: D.

544B History of Burma and Thailand (5)
Comparative study of neighboring Buddhist states, emphasizing themes of change and continuity since mid-18th century. Special attention given to divergent responses to colonialism and Western style development, and similarities in political and social forms.
Frederick: D.

544C History of Vietnam (5)
Modern Vietnamese civilization since 15th century, emphasizing political and social change after 1800. Special attention given to Vietnamese struggle with outside powers, including China, France, U.S., and Soviet Union.
Frederick: D.

545A Southeast Asia to ca. 1750: The Creative Synthesis (5)
Highlights of pre- and proto-history and development of classical states. Emphasis on cultural synthesis (Hindu, Buddhist, Muslim, and animist influences) and theme of change and continuity in both Great and Little traditions of region.
Frederick: Y.

545B Southeast Asia, ca. 1750 to 1942; Change and Conflict (5)
Indigenous change and widening effects of Western penetration, with emphasis on social and cultural developments. Nature of colonialism in region and response of colonized seen in light of both traditional and modern influences.
Frederick: Y.

545C Southeast Asia, 1942 to the Present: The Rise of New States and Societies (5)
Japanese occupation and its relationship to great national revolutions of 1940s. Social and cultural contents of nationalism and revolt, search for new political forms, and struggle against disunity and poverty.
Frederick: Y.

546A Traditional China (5)
Historical overview of China's cultural development, including opposing schools of Taoism and Confucianism, fabulous artistic heritage, values of familism, and evolution of premodern world's largest government and its means of ruling world's largest society.
Jordan: D.

546B Modern China (5)
Survey of long traumatic road from China's weakness against Western imperialism and dynamic modern forces in 1800s through reaction of Chinese intellectuals against long-held traditional ways, and ensuing nationalism and communism in 20th century. Mao's role in creation of new China reassessed and related to post-Mao Chinese goals and place in world.
Jordan: D.

548A Traditional Japan (5)
Development of Japan's early civilization including indigenous elements and those derived from Korea and China. Political development of Japan leading to its position vis-a-vis Western nations in 19th century.
Jordan: D.

548B Modern Japan (5)
Political weakness of Tokugawa system leading to opening of Japan to Western trade and restoration of emperor, favorable economic and political base which allowed Japan to enter successfully into competitions with European nations, Japan's ultranational era and post-war reconstruction.
Jordan: D.

549 Colloquium in History of East Asia in Modern Times (5)
Historical literature relating to process of modernization of China and Japan from 1860s to 1990s. Readings and reports.
Jordan: D.

551 Medieval People (5)
Inquiries in depth into lives and epochs of representative individuals of Medieval Europe. Look at Middle Ages through biography.
Reeves: Y.

552 Medieval Civilization (5)
Transmission of Christianity and classical culture to barbarians and their work of combining the two into new civilization in early Middle Ages. Medieval civilization at its height: church, schools, and scholastic thought and secular culture.
Reeves: Y.

555 The Age of Michelangelo (5)
The life of Michelangelo (1475-1564) spans the two most significant movements in early modern European history, the Renaissance and the Reformation. All of his work, artistic and literary, reflects these movements. This course deals with philosophy, theology, architecture, art history, literature, and history.
Bebb: Y.

556A Italian Renaissance (5)
Major political, social, economic, and cultural currents of Italian city states from 1150 to 1550. Focus on Dante, Petrarch, Boccaccio, Bruni, Machiavelli, Guicciardini, Michelangelo, Leonardo da Vinci, etc.
Bebb: Y.

556B Northern Renaissance (5)
History of Renaissance outside Italy: politics, economics, sociology, and intellectual currents of Germany, France, Spain, Burgundy, and England from 1300 to 1600. Treated thematically, course focuses on Erasmus, More, Ximenes, Reuchlin, Hutten, Bude, etc.
Bebb: Y.

556C Reformation (5)
Protestant, Catholic, and Counter-Reformations in Europe, showing their relationship to social, political, economic, and religious movements of 15th and 16th centuries. Roles of Luther, Zwingli, Calvin, Cranmer, Erasmus, Loyola, etc.; Protestant and Catholic churches and sects in western and eastern Europe.
Bebb: Y.

557 Florentine People (5)
Major figures in Florence from 1300 to 1600, from Dante to Galileo. Concerns with some originators of modern thought in areas of artistic theory, poetic form, Italian language, political ideas, scientific method, and historical composition.
Bebb: D.

558A Early Modern Europe, 1559-1648 (5)
Main political, economic, and social developments during Age of Spanish Hegemony: Hapsburg power, wars of religion and ideological struggle, challenge of Bourbon France—Henry IV and Richelieu.
Baxter: Y.

558B Early Modern Europe, 1648-1715 (5)
Main political, economic, and social developments: rise of absolutism and France of Louis XIV, French hegemony and its challenges, society of hierarchy.
Baxter: Y.

558C Early Modern Europe, 1715-1774 (5)
Main political, economic, social, and intellectual developments: change from society of "estates" to that of class, New Husbandry, Industrial Revolution, rise of Prussia and Frederick the Great, balance of power, and Enlightenment and Enlightened Despots.
Baxter: Y.

559 Philosophies of History (5)
Study and discussion of different philosophies of history dating from ancient to modern period. Analysis of how thinkers have taken empirical data of history and shaped them into metaphysical form.
Reeves: Y.

560 Women in European History (5)
The family, work, feminism, and women and politics are major topics of this introduction to women's history in France, England, Germany, and Russia from Renaissance to present, with emphasis on more recent developments.
Harvey: D.

562A Europe, 1814-1871 (5)
Europe from Congress of Vienna through Franco-Prussian War. Growth of liberalism and nationalism, revolutions of 1830 and 1848, Industrial Revolution, unification of Italy and Germany, social and intellectual movements.
McGeoch: Y.

562B Europe, 1871-1914 (5)
Development of Austria-Hungary, France, Italy, Germany, Great Britain, and Russia including imperialism. Background of WWI and social and intellectual movements.
McGeoch: Y.

564A Europe Between World Wars (5)
Fascism, communism, world depression, and 20-Year Armistice between 1919 and 1939: social, economic, and intellectual approach.
Whealey: Y.

564B Contemporary Europe (5)
Europe since 1945: postwar settlement, Cold War, E.E.C.: survey of developments in Britain, France, Italy, Germany, and some

smaller countries.
Staff; Y.

566A Modern France in the 19th Century (5)
Rise and fall of Napoleon I; his impact on France and Europe; monarchist interlude; revolution of 1848 and election of Louis Napoleon; Second Empire, liberal and authoritarian; wars and transformation of Europe; fall of Napoleon and Paris Commune; Third Republic.
Chastain; Y.

566B Modern France in the 20th Century (5)
Dynamic and stagnant aspects; nostalgia and rejection of 20th century; impact of 20th century; democracy in France; European and colonial wars; communist movement from Popular Front to Common Program; anti-communism in France; French in changing world; De Gaulle, his predecessors, and his successors.
Chastain; Y.

568A Modern Germany in the 19th Century (5)
Cosmopolitanism and movement to create national German state, rise of capitalism and decline of handicraft, liberation of German peasantry, revolution of 1848 and reaction, blood and iron chancellor, Germany's rise to European predominance, rise of worker movement, German society at turn of century.
Chastain; Y.

568B Modern Germany in the 20th Century (5)
Germany on eve of WWI: military fiasco and creation of Weimar Republic; Weimar, Berlin, Munich, and Dresden: attempt to forge democracy; Third Reich and transformation of German society; WWII and Final Solution; Communist Germany and Federal Germany; 2 societies and 2 states, 1945-1990.
Chastain; Y.

570 History of the Byzantine Empire 324-1453 (5)
Decay of Roman world and emergence of Christian Empire, 324-717; Medieval Roman Empire, 717-1056; weakening of Central Administration and apparent revival under Comneni, 1025-1204; Byzantium and neighboring world, 1204-1453; church and state; education and learning; Byzantine art; social, political, and military developments.
Kaldis; Y.

572A Balkans in Early Modern Period, 1453-1804 (5)
Ethnographic structure of Balkan peoples under rule of Ottoman Empire. Ottoman institutions and society; political, social, economic, religious, and cultural developments in Balkans in 15th, 16th, 17th, and 18th centuries.
Kaldis; Y.

572B Balkans in 19th Century, 1804-1878 (5)
Evolution of modern Balkan nationalism and rise of Balkan states. Ottoman dissolution and Balkan revolutionary nationalism; political, social, economic, religious, and intellectual developments; domestic Balkan policy and foreign intervention.
Kaldis; Y.

572C Balkans in 20th Century, 1878 to Present (5)
Historical, cultural, and ethnic background of Balkan peoples. Social, economic, political, and intellectual developments in Balkans; communication of southeast European states.
Kaldis; Y.

574A Balance of Power: Napoleon to the Kaiser (5)
Diplomatic history from Congress of Vienna to WWI. Age of Metternich, Italian and German unification, new imperialism, and prewar alliances and alignments.
McGeoch; Y.

574B History of International Diplomacy, 1914-1939 (5)
International problems of peace and war, international organization and alliances.
Whealey; Y.

574C History of International Diplomacy, 1939 to Present (5)
International problems of peace and war on worldwide scale since 1939, international organization and alliances.
Whealey; Y.

576 Biography: Leaders in 19th Century Europe (5)
Lives of great and near-great in 19th Century Europe.
McGeoch; D.

582A History of Russia (5)
Russia from earliest times to 1825. Kievan Russia, Muscovy, emergence of Tsarist Russia. Territorial expansion and role as great power in Europe and Asia.
Miner; Y.

582B Russia: Road to Revolution, 1825-1917
Tsarist Russia to Soviet Union, 1825-1917; background for revolution. Bolshevik seizure of power and consolidation of dictatorship.
Miner; Y.

582C Soviet Union (5)
Soviet Union since death of Lenin (1924); internal affairs of Communist regime.
Miner; Y.

589 Later Medieval England, 1307-1485 (5)
Comprehensive examination of political, social, intellectual, ecclesiastical, and economic aspects of period.
Reeves; D.

590A Tudor England (5)
England in 16th century. Tudor politics, English Reformation and major cultural and economic developments of Shakespeare's England.
Harvey; Y.

590B Stuart England (5)
England in 17th century. Constitutional crisis of Stuart period, civil war and revolution, and major cultural and economic developments, including attention to folk culture.
Harvey; Y.

591 Colloquium in English History to 1714 (5)
Early modern English history from multidisciplinary perspectives.
Harvey; D.

591A English History to 1688 (5)
Stresses institutional aspects of medieval England and social, political, and constitutional developments in Tudor and Stuart periods.
Rauschenberg; Y.

591B English History Since 1688 (5)
Emphasizes cultural and economic developments, growth of British Empire, constitutional and social reforms, and impact of WWI and WWII.
Rauschenberg; Y.

592A Georgian England (5)
Political, social, intellectual, cultural, and economic developments of England in yrs prior to and during American and French revolutions.
Rauschenberg; Y.

592B Victorian England (5)
England from 1815 to 1900, with primary focus on political and economic developments that produced democratization of British life.
Rauschenberg, Richter; Y.

592C 20th Century England (5)
England from 1900 to present; beginning of welfare state, WWI, 1920s, Great Depression, road to WW II, and postwar welfare state.
Rauschenberg; Y.

594A The Medieval English Constitution (5)
English government from Anglo-Saxon times to end of Middle Ages. Growth of machinery of monarchy, central administration, courts, and common law. Rise of Parliament.
Reeves; D.

594B The Modern English Constitution (5)
Emergence of modern English constitution during 16th and 17th centuries, creation and growth of Tudor Constitution; significance of English Reformation for constitution, Tudor Parliament, "Century of Revolution" (1603-1689) and crisis of constitution, problems of sovereignty and obligation, constitution today.
Harvey; D.

595 History of Canada (5)
Introduction to Canada; its exploration and development under France and England, and its emergence as important modern nation.
Rauschenberg; D.

596 Quantitative Methods in History (5)
Introduction to descriptive and inductive statistical techniques used in historical research and analysis of current literature employing such techniques. Instruction in use of computer included.
Field; D.

597A Representative Historians and Their Writings: American History Emphasis (5)

Readings in historical logic and method. Development of historical profession in U.S. from early times to present as phase of American social and intellectual history. In depth consideration of important writers of American history and major schools of interpretation.

Hamby; Y.

597B Representative Historians and Their Writings: European History Emphasis (5)

Typical historians from time of Herodotus. Readings from their masterpieces to illustrate schools of interpretation, philosophies of history, and development of historical writing. Noteworthy historians in European history.

Kaldis; Y.

597C African Historiography (5)

Related philosophies of history, the uses of history, colonial and post-colonial African historiography, research methodology, use of oral sources, interdisciplinary approaches and new directions in research.

Booth; D.

598A Directed Study: American History (1-6)

Prereq: 24 hrs, perm. Intensive individual work either in research or individual systematic reading along lines of student's special interest and under supervision of staff members.

Staff; Y.

598B Directed Study: European History (1-6)

Prereq: 24 hrs, perm. Intensive individual work either in research or individual systematic reading along lines of student's special interest and under supervision of staff members.

Staff; Y.

598C Directed Study: World History (1-6)

Prereq: 24 hrs, perm. Intensive individual work either in research or individual systematic reading along lines of student's special interest and under supervision of staff members.

Staff; Y.

598D Problems in History (General) (1-6)

Prereq: 24 hrs, perm. Intensive individual work either in research or individual systematic reading along lines of student's special interest and under supervision of staff members.

Staff; Y.

600/800 Seminar: Colonial and Revolutionary America (10)

Readings and research in U.S. history prior to 1789. Presented in two-qtr sequence. No credit granted until 2nd qtr is completed.

Steiner; D.

601A/801A Colloquium in Colonial American History (5)

Literature and source materials; readings and reports.

Steiner; D.

601B/801B Colloquium in the Era of the American Revolution (5)

Literature and source materials; readings and reports.

Steiner; D.

605/805 Colloquium in Foundation of the American Republic, 1783-1819 (5)

Literature and source materials in field of early national period of American history; readings and reports.

Staff; D.

607/807 Colloquium in Era of Sectional Controversy, 1819-1850 (5)

Literature and source materials; readings and reports.

Field; D.

608/808 Seminar in United States History, 1850-1900 (10)

Selected topics in political history of U.S. in late 19th century. Presented in two-qtr sequence. No credit granted until completed.

Field; D.

609/809 Colloquium in Era of Foundations of Modern America, 1850-1900 (5)

Literature and source materials; readings and reports.

Field; D.

610/810 Seminar in 20th Century United States History (10)

Presented in two-qtr sequence. No credit granted until 2nd qtr completed.

Hamby, Pach; D.

611/811 Colloquium in History of the United States in Recent Times (5)

Literature and source materials; readings and reports.

Hamby, Pach; D.

614/814 Seminar in the Social, Intellectual, and Cultural History of the United States (10)

Presented in two-qtr sequence. No credit granted until 2nd qtr completed.

Alexander, Jellison; D.

615/815 Colloquium in Social, Cultural, and Intellectual History of the United States (5)

Literature and source materials; readings and reports.

Alexander, Jellison; D.

616/816 Seminar in History of United States Foreign Relations (10)

Presented in two-qtr sequence. No credit granted until 2nd qtr completed.

Gaddis, Pach; D.

617/817 Colloquium in History of American Foreign Relations (5)

Literature and source materials; readings and reports.

Gaddis, Pach; D.

621/821 Colloquium in Regional United States History (5)

Literature and source materials; readings and reports.

Staff; D.

627/827 Colloquium in Recent Latin American History (5)

Literature and source materials; readings and reports.

Grow; D.

629/829 Colloquium in History of Ancient Greece (5)

Literature and source material of ancient Greek civilization. Themes vary from yr to yr. May be repeated for credit.

Richter; D.

640/840 Seminar in African History (10)

Presented in two-qtr sequence. No credit granted until 2nd qtr completed.

Booth; D.

644/844 Seminar: Southeast Asia (10)

Presented in two-qtr sequence. No credit granted until 2nd qtr completed.

Frederick; D.

645/845 Colloquium in History of Southeast Asia (5)

Literature of Southeast Asian history, general culture, developments in 19th and 20th centuries; readings and reports.

Frederick; D.

646/846 Seminar: East Asia History (10)

Presented in two-qtr sequence. No credit granted until 2nd qtr completed.

Jordan; D.

652/852 Seminar in Medieval History (10)

Presented in two-qtr sequence. No credit granted until 2nd qtr completed.

Reeves; D.

657/857 Seminar in Renaissance-Reformation (10)

Presented in two-qtr sequence. No credit granted until 2nd qtr completed.

Bebb; D.

658/858 Seminar in Early Modern European History (10)

Presented in two-qtr sequence. No credit granted until 2nd qtr completed.

Baxter; D.

661/861 Colloquium in French Revolution (5)

French Revolution as prototype of revolutions: background, immediate causes, pattern of development, role of ideas and individuals in great social upheaval.

Baxter; D.

662/862 Seminar in 19th Century European History (10)

Presented in two-qtr sequence. No credit granted until 2nd qtr completed.

McGeoch, Chastain; D.

663/863 Colloquium in 19th Century Europe (5)

Literature and source materials; readings and reports.

McGeoch; D.

664/864 Seminar in 20th Century European History (10)

Presented in two-qtr sequence. No credit granted until 2nd qtr completed.

Miner, Whealey; D.

667/867 Colloquium in Modern France (5)

Literature and source materials; readings and reports.

Chastain; D.

674/874 Seminar in European Diplomacy Since 1815 (10)
Presented in two-qtr sequence. No credit granted until 2nd qtr completed.
Whealey, McGeoch; D.

683/883 Colloquium in Russian and Soviet History (5)
Literature and source materials; readings and reports.
Miner; D.

693/893 Colloquium in British History Since 1714 (5)
Literature and source materials; readings and reports.
Rauschenberg; D.

695 Thesis (as recommended by dept)
Staff; Y.

798A Directed Study: American History (1-6)
Prereq: 24 hrs, perm. Intensive individual work in either research or individual systematic reading along lines of student's special interest and under supervision of staff members.
Staff; Y.

798B Directed Study: European History (1-6)
Prereq: 24 hrs, perm. Intensive individual work in either research or individual systematic reading along lines of student's special interest and under supervision of staff members.
Staff; Y.

798C Directed Study: World History (1-6)
Prereq: 24 hrs, perm. Intensive individual work in either research or individual systematic reading along lines of student's special interest and under supervision of staff members.
Staff; Y.

894 Independent Study (1-16)
Prereq: Eligibility determined by grad faculty.
Staff; Y.

895 Dissertation (as recommended by dept)
Staff; Y.

■ HUMAN AND CONSUMER SCIENCES

- **Child Development and Family Life (HECF)**
- **Food and Nutrition (HEFN)**
- **General Home Economics (HEC)**
- **Home Economics Education (HECE)**
- **Interior Design (HEID)**
- **Textiles and Clothing (HETC)**

The School of Human and Consumer Sciences offers graduate programs leading to the Master of Science degrees with concentrations in child development and family life and in food and nutrition.

Students meeting the following requirements will be considered for unconditional admission:

- A bachelor's degree from an accredited college or university in home economics or related areas.
- A minimum overall grade-point average (g.p.a.) of 2.7 with 3.0 on the last 90 hours (4.0 scale).
- Graduate Record Examination (GRE) scores with a minimum of 420 in Verbal and 450 in Quantitative.
- A minimum of 20 quarter hours of undergraduate preparation in the home economics concentration in which the student wishes to specialize or an approved related field.

In addition, applicants must submit a letter of intent which includes their professional goals and reasons for applying for graduate study and three letters of recommendation from individuals qualified to evaluate their capacity for graduate study. The application will not be reviewed until all of the above information, the application form, and official transcripts of all college coursework are received.

If a student fails to meet the above standards, the candidate may be admitted on a conditional basis. Students admitted conditionally will be informed of what conditions have to be met prior to being accepted unconditionally. Conditions may include taking a prescribed number of courses which may or may not be taken for graduate credit. Candidates admitted on a conditional basis are not eligible for financial assistance.

A maximum of 12 quarter hours may be accepted by transfer from an approved institution which offers the master's degree, provided the transferred coursework is acceptable to the student's advisor and is not more than five years old. Credit for courses taken by correspondence or workshop hours cannot be accepted toward meeting the required minimum hours.

While applications for admission are accepted during all quarters, it is recommended that both applications for admission and for financial aid for the following year be received by April 1. Full and partial associateships are available, as well as tuition scholarships. Awards are made to the limit of available funds.

To be awarded the M.S. degree, students must earn a minimum of 45 quarter hours in programs with a thesis requirement and 50 quarter hours in programs with a seminar paper requirement. All students are required to have an approved program of study in their file by the end of the first quarter of enrollment. All graduate programs are planned by the student and his or her advisor, taking into consideration the undergraduate preparation and the professional goals of the student.

CHILD DEVELOPMENT AND FAMILY LIFE

Early Childhood Education and Family Studies (Thesis Option):

- Minimum of 45 hours
- 22 hours in major and supporting areas
- 12 hours in an approved minor
- 11 hours in other required courses:

HEG 692	Research (3)
HEG 695	Thesis (3)
PSY 520	Elementary Statistics (5)
OR EDRE 720	Educational Statistics (5)

Early Childhood Education or Family Studies (Seminar Paper Options):

- Minimum of 50 hours
- 28 hours in major and supporting areas
- 12 hours in an approved minor
- 10 hours in other required courses:

HEG 692	Research (5)
PSY 520	Elementary Statistics (5)

FOOD AND NUTRITION

Clinical Nutrition (Thesis Required):

This emphasis prepares Registered Dietitians and those finishing a baccalaureate degree in food and nutrition to further their education for professional advancement in the area of nutrition and dietetics. This program does not prepare a student to become a Registered Dietitian.

- Major Courses (20 hours)

HEFN 528	Advanced Nutrition (4)
HEFN 531	Studies of Science & Nutrition (3)
HEFN 601	Maternal & Child Nutrition (4)
HEFN 660	Sports & Fitness Nutrition (3)
HEG 691B	Seminar in Food & Nutrition (3)

Plus at least one course for hour requirement

- Minor Courses (12 hours)

BIOS 550	Endocrinology (4)
BIOS 682	Human Physiology (3)
CHEM 589	Basic Biochemistry (5)

- Other Requirements (13 hours)

HEG 692	Research (4)
HEG 695	Thesis (4)
PSY 520	Elementary Statistics (5)

International and Community Nutrition Statistics (Seminar Paper Required):

This emphasis prepares students to work in community-based programs in the U.S. and abroad dealing with hunger and malnutrition. This emphasis would be appropriate for individuals interested in working with programs developed to reduce the incidence of poverty and malnutrition both in the U.S. and abroad such as returning Peace Corps Volunteers, those from developing countries, and those from community-based social service programs in the U.S.

- Major Courses (27 hours)

HEFN 526	World View of Nutrition (3)
HEFN 528	Advanced Nutrition (4)
HEFN 529	Community Nutrition (3)
HEFN 531	Studies of Science & Nutrition (3)
HEFN 533	Food Sanitation & Safety (2)
HEFN 537	Food Service Systems I (5)
HEFN 601	Maternal & Child Nutrition (4)
HEG 691B	Seminar in Food & Nutrition (3)

- Minor Courses (select 12 hours)

EDCI 510	Principles of Curriculum (4)
EDRE 510	Educational Measurements (4)
HECE 544	Home Economics in Adult Education (4)
HEFN 534	Quantity Food Production (4)
HEFN 535	Purchasing (4)

HEFN 538	Food Service Systems II (4)
HEFN 539	International Cuisine (4)
HLTH 630	Epidemiology (4)
HRM 525	Labor Relations (4)
INCO 510	Cross-Cultural Communication (4)
INST 690	Developmental Studies (4)
MGT 520	Human Resource Management (4)
MKT 541	International Marketing (4)

Other courses with permission of advisor

- Other Requirements (11 hours)

HEG 692	Research (6)
PSY 520	Elementary Statistics (5)

• Child Development and Family Life (HECF)

562 Readings in Child Development and Family Life (3-6, max 10)
Prereq: perm.
Staff: D.

562A Pluralistic Life Styles (2)
Prereq: perm. Analysis of current pluralistic marriage and family life patterns in American society.
Stricklin: F; Y.

562B Parenthood (2)
Prereq: perm. Analysis of dynamics of parenthood.
Varner: W; Y.

562C Middle Childhood (2)
Prereq: perm. Interpretation of developmental tasks of middle childhood years as they reflect and influence family guidance and transmission of values.
Staff: Sp; Y.

562D The One-Parent Family (2)
Prereq: perm. Analysis of dynamics of one-parent family in light of its needs, challenges, and distinctive characteristics.
Staff: Sp; Y.

562E Youth Identity Crisis (2)
Prereq: perm. Analysis of identiy crisis in terms of its psychological and interpersonal aspects of adolescence.
Stricklin: W; Y.

562F The Aged Family (2)
Prereq: perm. Synthesis of multiple dimensions of aged family.
Varner: F; Y.

563 Preschool Administration (5)
Prereq: perm. Problems in organizing and administering preschools, play groups, and Head Start programs.
Staff: Sp; Y.

565 Parent Education (4)
Prereq: 160. Supervised experience in organizing, formulating, conducting, and evaluating discussion groups, classes, programs, and individual conferences for parents and youth leaders.
Staff: F; Y.

571 Family Life Education (4)
Prereq: perm. Selected fundamental educational problems explored. Examination of various dimensions of teacher's role and critical appraisal of student's professional competency to teach classes in family relations.
Varner: W; A.

580 Death and Dying (4)
Examination of why we fear death, how it affects family relationships, source of guilt feelings, and related issues; synthesis of multiple dimensions of death and dying.
Stricklin; Sp; Y.

589 Self, Aging, and Society (4)
Prereq: one course in SOC, PSY or HECF. Synthesis of issues inherent in biological theories, psychological aspects, sociological perspectives, health care aspects, and public policy issues in aging and aged within context of self and society.
Stricklin; W; Y.

664 Advanced Child Development (5)
Prereq: perm. Theories and principles of child development as advanced by various disciplines.
King; D.

672 Special Studies in Human Development (2-5)
Prereq: 562. In-depth study in selected area.
Staff: F, W, Sp, Su; D.

674 Advanced Family Development (5)
Prereq: 562. Specific conceptual schemes of major theorists in various areas of home economics relative to broad issues of philosophy and values. Consideration of differential amenability of various areas in procedures to problems of family development.
Staff; F; D.

675 Introduction to Principles of Family Consulting (4)
Prereq: 674 or perm. Development of operational definitions, theoretical formulations, and illustrations applicable to its uniqueness.
Staff; D.

679 Special Studies in Family Relations (2-5)
Prereq: 562. In-depth study in selected area.
Staff: F, W, Sp, Su; D.

• Food and Nutrition (HEFN)

522 Experimental Foods (4)
Prereq: 222, organic chemistry. Factors which affect results of different methods used in food preparation. Research techniques using subjective and objective evaluation.
Nemapare; Sp; Y.

525 Readings in Food and Nutrition (2-4, max 8)
Prereq: perm. Critical review of current literature with emphasis on modern theory and practice in nutrition and food preparation.
Staff; D.

526 World View of Nutrition (3)
Prereq: 128, SOC or ANTH. Survey of world food situation, with consideration of environmental, cultural, governmental, and economic factors that relate to food production and consumption. Evaluation of effects of these factors in meeting dietary needs.
Nemapare; W; Y.

528 Advanced Nutrition (4)
Prereq: Organic chemistry. Biochemical and physiological processes in nourishment of body. Determination of nutrient needs and evaluation of nutritional status.
Edwards; F; Y.

529 Community Nutrition (3)
Prereq: 128, perm. Assessment of community nutrition needs. Survey of agencies and programs providing services. Role of nutritionist. Methods and resources for nutrition education, legislation.
Edwards; Sp; Y.

530 Therapeutic Nutrition (4)
Prereq: 428, biochemistry. Use of dietary modification in prevention and treatment of disease. Nutritional assessment; problems in nutritional care.
Edwards; W; Y.

531 Studies in the Science of Nutrition (3-4, max 8)
Prereq: 528 or concurrent. Nutrition as related to physiological and metabolic processes. Individual research project.
Staff; D.

533 Food Sanitation and Safety (2)
Applied food service sanitation procedures in the food handling functions of purchasing, storage, preparation, and service. Upon completion, students will be eligible for National Certification in Food Safety.
Neumann; W; A.

534 Quantity Food Production (4)
Food preparation principles applied to large quantity food production, menu planning, and service in institutions. Experience in residence halls.
Neumann; F; Y.

535 Food Service Purchasing (4)
Prereq: 534 or perm. Managerial approach to the purchasing and selection of a wide variety of food, beverage, and non-food items. Emphasis on purchasing the optimal amount at the optimal price.
Neumann; W; A.

537 Food Service Systems I (5)
Prereq: 334, perm. Introduction to tools and functions of management in food service with emphasis on organizational structure, catering, staffing, work methods, human relations skills, sanitation, and safety.
Neumann; W; Y.

538 Food Service Systems II (4)
Prereq: 537. Institutional food purchasing, kitchen layout design, equipment selection, facilities management, and cost control.
Neumann; Sp; Y.

539 International Cuisine (4)
Prereq: 534, 537 or perm. Principles of international cuisine, advanced food preparation, and research of areas of specific interest.
Neumann; Sp; A.

599 Field Experience—Food and Nutrition (2-12)
Prereq: perm. Clinical experience through cooperation with hospitals, institutions, community agencies, or business organizations.
Staff; F, W, Sp, Su; D.

624 Advanced Food Science (3-4)
Prereq: perm. Chemical and physical behavior of basic food constituents and their influence on characteristics and nutritive value of foods.
Staff; D.

626 Methods of Food and Nutrition Investigation (3-4, max 4)
Prereq: 531 or 624.
Staff; D.

627 Studies in Food and Nutrition (3-5, max 5)
Prereq: 522 or 531.
Staff; D.

660 Nutrition for Sports and Fitness (3)
Exploration of current information available in scientific literature concerning interrelationships between dietary adequacy and physical performance.
Hagerman; W; Y.

• General Home Economics (HEG)

579A-K Workshop in Home Economics (1-6, max 10)
Prereq: teaching experience or perm. Special workshops on topics related to home economics:

579A	Home Economics Education
579B	Clothing and Textiles
579C	Food and Nutrition
579D	Child Development
579E	Consumer Economics
579F	Home Furnishings
579G	Home Management
579H	Household Equipment
579K	Family Life Education
579L	Blended Families

590A-D Independent Study (1-5, max 15)
Prereq: perm. Independent study, advanced study under direction of faculty member in area of specialization.

590A	Consumer Service and Education
590B	Human Development & Family Ecology
590C	Human Environment & Design
590D	Human Nutrition & Food Science

691A-F Seminar or Short Course in Home Economics (2-4, max 4)
Prereq: perm of dept chair. Research and recent developments in area of specialization.

691A	Child Development and Family Life
691B	Food and Nutrition
691C	Home Economics Education
691D	Housing and Management
691E	Textiles and Clothing
691F	Research

692 Research (2-4, max 8)
Prereq: perm. Independent investigation in one area of home economics.

695 Thesis (2-10, max 4)
Prereq: perm.

• Home Economics Education (HECE)

503 Women and Leadership (4)
Study of women and leadership with an analysis of current issues and trends in relation to historical, sociological, psychological, and economic perspectives. Strategies for developing leadership skills are integrated throughout the course.
Staff; F, W; Su; Y.

544 Home Economics in Adult Education (4)
Organizational procedures, curriculum materials, and methods of conducting adult education in various settings.
Varner; W; A.

552 Home Management for the Disabled Homemaker (4)
Home management problems faced by disabled individuals and creative methods and materials to use in solving those problems.
Varner; W, Sp; Y.

553 Functional Assessment in Independent Living (3)
Identification of the functional limitations experienced by disabled clients in completing household tasks, methods for assessing functional limitations, and creative strategies and resources to increase functioning in the performance of household tasks.
Varner; D.

640 Supervision in Home Economics (4)
Prereq: teaching experience in home economics. Leadership functions, principles, and practices involved in effective supervision in home economics.
Staff; D.

646 Home Economics in Higher Education (4)
Prereq: perm. Basic philosophy and issues concerning place of home economics in higher education today. General trends in curriculum offering; teaching practices, evaluation, administration, and research.
Staff; D.

• Interior Design (HEID)

580 History of Furniture (3)
Prereq: perm. Styles of furniture and furnishings. Emphasis on periods of past and their aesthetic influence on present. Practical projects in designing and furnishing homes.
Steiner; F; Y.

581 Contemporary Design in Furnishings (3)
Prereq: perm. Furnishings and interiors of present era; factors that have influenced development of contemporary design; important designers and their work.
Pierucci; W; Y.

582 The Decorative Arts (3)
Prereq: perm. Aesthetic study of development of design in accessories of glass, pottery, oriental rugs, metal such as silver and pewter. Use of accessories in home and in displays.
Steiner; Sp; Y.

• Textiles and Clothing (HETC)

505A History of Costume (4)
Clothing through the ages as reflection of historical period and source for present-day design.
Cone; W; Y.

505B History of Textiles (2)
Textiles through the ages as reflection of historical period and source for present-day design.
Cone; D.

507 Textile and Fashion Industry (4)
Prereq: perm. Problems confronting buyer of textile products as related to specific manufacturing situations involved.
Paulins, W; Y.

518 Quality Control (4)
Prereq: perm. Principles, techniques, and standard testing methods of quality control for textiles, clothing, and interior design. Lab sessions emphasize standard textile testing procedures and research methods. Federal and state laws and codes designed to protect consumers also discussed.
Paulins; Sp; Y.

519 Studies in Textile Testing (3)
Prereq: perm. Individual research and lab testing of problems in advanced textiles.
Staff; D.

554 Clothing for Persons with Special Needs (3)
Various dressing techniques and functional design alternatives available to increase independence of individuals with special needs. Focus on such populations as the elderly, mentally disabled, and temporarily or permanently physically disabled.
Cone; D.

609 Psychological, Social, and Economic Aspects of Clothing (4)
Prereq: perm. Contemporary uses and roles of textiles and clothing as affected by economic, social, and psychological forces seen in historic perspective.
Staff; D.

612 Advanced Studies in Clothing (2-4, max 4)
Advanced problems and techniques in clothing construction. Emphasis on scientific principles of construction and experimental methods and fabrics.

Staff: D.

615 Advanced Studies in Textiles (2-4, max 4)
Physical and chemical examination of fibers, yarns, and fabrics with emphasis on application of testing techniques as applied to individual textile studies.
Staff: D.

617 Readings in Textiles and/or Clothing (2-4, max 8)
Prereq: perm. Analysis and interpretation of current writings and research with emphasis on new developments and trends.
Staff: D.

INDIVIDUAL INTERDISCIPLINARY PROGRAMS

A graduate student with demonstrated ability and intellectual maturity may apply for admission into the Individual Interdisciplinary Program (IIP) at either the master's or doctoral level. Entry into the program requires *unconditional* admission to graduate study. Applicants should have achieved at least a 3.3 undergraduate grade-point average to pursue a master's degree in IIP, and/or a 3.6 graduate grade-point average to pursue the Ph.D. degree in IIP. The applicant may also have to provide official test scores such as GRE, GMAT, or MAT. The IIP requires that the student, with the assistance of his or her advisory committee, develop a program of study that includes a *minimum* of three emphasis areas, each in a different department or school. At least two of the departments or schools must offer graduate degrees at the level sought by the student.

At the master's level, the minimum requirements include 15 hours of course credit in each area of emphasis, plus a final project (thesis, performance, etc.) acceptable to the student's advisory committee. The credit hours required for the final project will be determined by the advisory committee. The student will be required to meet the minumum requirements of the assigned college for the master's degree.

At the Ph.D. level, no fixed minimum of course credit is imposed beyond that associated with the residency requirement (three consecutive quarters in a full-time equivalent status); however, a practical minimum in terms of hours of course credit is 135 beyond the bachelor's degree, or 90 beyond the master's degree. The student will be required to meet the minimum requirements of the assigned college for the doctoral degree.

The IIP is administered through the Office of Graduate Student Services; inquiries should be addressed to the Director of the Individual Interdisciplinary Program at that office. Upon receipt of the inquiry, appropriate application forms will be returned to the applicant. In addition to the standard application forms, three letters of recommendation, official test scores that may be required by the individual departments/schools participating in the program of study, two official transcripts from each post-secondary school attended, and the application fee, each applicant is required to submit the following:

(1) A statement (not to exceed two pages) describing the applicant's goal and rationale for pursuing an IIP degree, including the reasons why the degree goal is not available through an existing advanced degree program at Ohio University. This procedure requires that the applicant be familiar with the possibilities described in the current Ohio University *Graduate Catalog.*

(2) A tentative plan of study.

After all application documents are received, the Director of the Individual Interdisciplinary Program determines whether or not: (1) the student's qualifications are minimally acceptable, (2) the University's capabilities and the student's goals are compatible, and (3) the proposed program is unavailable in an existing format in an existing academic unit.

If these requirements are satisfied, the credentials are forwarded to the persons chairing the graduate committees of the departments or schools involved for evaluation and recommendations from qualified faculty. If the recommendations from the departments/schools and the academic college are positive, the student is admitted to the program and an advisory committee is appointed. The committee is responsible for preparing the program requirements, periodically reviewing the student's progress, administering comprehensive examinations, and directing the final project or dissertation. The student will be required to meet the minimum requirements of the assigned college for the degree level sought.

Application materials for the fall quarter must be received by March 1. Application materials for other quarters of entry must be received three months prior to the beginning of the quarter of entry requested

INDONESIAN

(See Foreign Languages and Literatures)

INDUSTRIAL AND SYSTEMS ENGINEERING

(See Engineering, Industrial and Systems)

INTERNATIONAL AFFAIRS

- **International Administrative Studies**
- **African Studies**
- **Development Studies**
- **Latin American Studies**
- **Southwest Asia Studies**
- **Communication and Development Studies**

The Center for International Studies offers an interdisciplinary Master of Arts degree in international affairs. The student may concentrate on the culture, the institutions, and one of the languages of a major world region: Africa, Southeast Asia, or Latin America, or may develop a program of study with an international thematic focus: development studies, administrative studies, or communication and development studies. The M.A.I.A. degree is intended to give individuals freedom to develop a program best suited to their academic and professional requirements within an international or cross-cultural context.

Students are required to demonstrate an acceptable level of achievement in a language other than English appropriate to the area of concentration. This may be accomplished in the following ways: (1) For non-European languages, either (a) complete satisfactorily a minimum of one academic year (generally nine credit hours) in one of the following languages currently taught at Ohio University: Arabic, Chinese (Mandarin), Indonesian/Malay, Japanese, or Swahili, or (b) take an examination in a language not taught at Ohio University, or demonstrate an acceptable level of achievement administered by other recognized testing agencies. (2) For students in concentrations offering a European language, an intermediate level of proficiency is required for the degree.

All students in the M.A.I.A. program must maintain a minimum grade-point average (g.p.a.) of at least 3.0. Students who fall below 3.0 will be put on probation and must raise their g.p.a. by the end of the following term. Failing to do so will automatically result in the student being dropped from the program. University policy prohibits awarding any type of financial assistance to students on probation. Also, if a student receives more than two grades below B, he or she will be dropped from the program. A grade below C will not count toward the degree requirement.

A mandatory two-hour course requirement for all programs is International Studies 500, Introduction to Graduate Study. Depending on the program, a comprehensive written or oral exam is required of all students. This examination will ordinarily take place in the last quarter of study.

Both thesis and nonthesis options are available. The number of credits granted for the thesis (to a maximum of ten) will be determined by the student's advisory committee.

Degree Programs

The degree programs are interdisciplinary and designed to give students freedom to choose courses from a number of fields which best fulfill their academic and professional objectives. Following are brief descriptions of the individual program requirements and a list of core courses appropriate to each area of concentration:

• *International Administrative Studies*

The objective of this program is to develop leadership and administrative skills for managing local and international operations. The degree program, interdisciplinary in nature, is designed to provide students freedom to choose courses from a number of fields that best fulfill their academic and professional goals.

Entry is in fall quarter ONLY. Students may not enter in subsequent quarters. A minimum of 60 credit hours are required for graduation, with an accumulated grade-point average of 3.0.

Students are required to demonstrate an acceptable level of achievement (proficiency) in a language other than English pertaining to the area of concentration. International students will use their native language to fulfill this requirement. Students whose native language is English are required to take either a European or non-European language.

Core Requirements

Part I Required:

INST 500	Intro to Grad Studies
CS 590	Computers in Society
ECON 501	Statistical Reasoning and Analysis
OR POLS 582	
OR EDRE 720	
GEOG 569D	Geog. Pattern of Devel. Count.
ECON 550	Econ. Development
INCO 510	Cross-Cult. Communication

Part II Required:

MGT 500	
OR POLS 511	
INST 588	Comparative Administration
INST 589	Applied Research Project

Area Focus

Choose one geographical area from Africa, Southeast Asia, Latin America, Europe, or East Asia (Japan). A minimum of two courses or eight hours from one area must be taken.

Administrative Focus

Choose one area of administration from business, education, health, public administration, or telecommunications. A minimum of two courses or eight hours must be taken from that area.

Students are required to meet the Area Focus and the Administrative Focus requirements *from the approved list of* courses *only*. This list is available in the office of the International Administrative Studies Program. Students are required to finalize their course planning in consultation with the director of the program.

Applied Research Project

In the candidate's final quarter of study, the student is required to complete a research project in which areas of global concern are explored. Each student registers for 4 credit hours under INST 589 to fulfill this requirement. Students are required to choose their project topics from one common theme that is chosen each year. Each student is required to examine the topic in relation to countries other than their own. A minimum final grade of B is required for successful completion of the project.

• *African Studies*

The multidisciplinary approach allows students the opportunity to explore Africa in depth while having the freedom to choose from a number of courses which best fit their academic and professional objectives. Students are required to complete a minimum of 47 quarter hours of coursework in addition to nine hours of language study unless the language requirement has been met prior to enrollment in the program. At least 25 hours must be taken from African core courses. Courses must be selected from not less than three disciplines. A minimum of three courses must be taken in the principal discipline, and a minimum of two courses in each of two minor disciplines. A minimum of two courses must be taken in seminar work. Ordinarily principal disciplines are selected from the social sciences or humanities (e.g., anthropology, art history, communications, economics, education, geography, history, journalism, literature, linguistics, nutrition, philosophy, and political science). Art history, philosophy, and literature also may be combined for an African humanities emphasis.

A comprehensive written examination is required. The examination is given once a quarter, except in summer, and should be taken near the completion of the student's program.

CORE COURSES

Afro-American Studies

530	Social Theories of Underdevelopment
532	Third World National Movements

Anthropology

551	Political Anthropology
557	Anthropology of Religion
581	Cultures of Sub-Saharan Africa

Art History

532	West African Art
533	Central African Art

Economics

551	Agricultural Development
555	African Economic Development

Education

505	Comparative Cultures and Education
506A	Education and Development in Africa
508	Poverty, Education, and International Development

Foreign Languages

571-2-3	Elementary Arabic
571-2-3	Elementary Swahili
574-5-6	Intermediate Arabic
574-5-6	Intermediate Swahili

Geography

531	African Thematic Geography
532	Africa: Regional Approaches
684C	Seminar in Regional Geography: Africa

History

533	Oil, Energy, and International Diplomacy
534	The Arab-Israeli Dispute
535	Colloquium: Middle East History
535A	Middle East to 1800
535B	Middle East Since 1800
536A	North Africa in Modern Times
536B	North Africa Since 1914
537	Slavery 1400 to Present
538	History of West Africa
538A	History of East Africa
541	Colloquium: African History
541A	Early Africa
541B	Traditional Africa
541C	Modern Africa
542A	South Africa to 1899
542B	South Africa Since 1899
640	Seminar in African History

Human and Consumer Sciences

525	Readings in Food and Nutrition
526	World View of Nutrition

Philosophy

572	Islam
578	African Philosophy

Political Science

541	Government and Politics in Africa
563	The United States and Africa
590	Africa and the OAU

• *Development Studies*

Development studies focuses on the process of development in the less developed countries from a multidisciplinary perspective, drawing primarily on the social sciences. The complexity of issues in economic, social, and political development is broader than any one discipline and requires tools of analysis, conceptual approaches, and information from a variety of sources.

Admission is limited to fall quarter only. A minimum of 51 hours is required for the degree. The program requires that all students complete a core sequence of courses, a total of four. Three of these form a year-long course that takes the student from development theory to development case studies to development practice. The fourth, taught in the fall, acquaints all students with basic geographical patterns and characteristics of the less developed countries. In addition, students are required to complete courses in three separate disciplines (with at least three courses in one of the fields and at least two courses in each of the other two fields). The courses are to focus on the issue of development and are to be selected according to the candidate's needs and preferences.

Ordinarily, the three disciplines are selected from among the social sciences (e.g., *anthropology, economics, geography, history, philosophy, sociology, and political science)*. Some courses are available from the natural sciences (botany, geology, etc.), and a combination of courses from business administration, communication, education, or engineering focusing on the development theme also may be used to satisfy the requirements for one of the three disciplinary fields.

Each candidate must demonstrate a minimal proficiency in a second language. Students can meet this requirement through evidence of (1) one year of university study of a modern language; (2) one year of university study of a Third-World language; (3) native speaking ability; or (4) testing through another agency, such as the Peace Corps.

A comprehensive oral examination is required of all students (except those choosing to complete a thesis). This examination ordinarily takes place in the last quarter of study.

A list of approximately one hundred courses offered at Ohio University related to the subject of development is available from the director of this program and is revised for student use each year. The following is a list of eleven of those courses currently offered by separate departments which is representative of that longer list.

Anthropology

545	Gender in Cross-Cultural Perspective

Business Administration

584	International Comparative Management

Economics

550	Economic Development

Education

503	Poverty, Education, and International Development

Geography

531	African Thematic Geography

Human and Cosumer Sciences

526	World View of Nutrition

International Studies

601	Seminar in Development

Interpersonal Communication

510	Cross-Cultural Communication

Political Science

540	The Politics of Developing Areas

Sociology

518	Third-World Development

Telecommunications

765	Communication and National Development

• *Latin American Studies*

This program allows the student to explore the cultural, institutional, and structural realities of Latin America in depth and is designed for the individual who wishes to expand his or her expertise regarding this important world region.

Each student is required to complete a minimum of 53 quarter hours of coursework. A minimum of 25 credit hours in the major (courses selected from three disciplines) and 20 credit hours in the minor are required. The minor is defined as a professional skills development area. The major and minor fields of study are chosen primarily from among the liberal arts disciplines which offer specialized courses on Latin America at Ohio University: *anthropology, economics, geography, history, literature, political science, and sociology*. Students may, however, study one professional or vocational component selected from a variety of technical fields, including *international business, international education, food and nutrition, journalism, teaching English as a foreign language, telecommunications, etc.*

CORE COURSES

Anthropology

566	Cultures of the Americas
568	Latin American Prehistory

Art History

531	Pre-Columbian Art

Economics

554	Latin American Economic History
574	Economics of Latin America

Geography

535	Geography of Latin America
684A	Seminar in Regional Geography: Latin America

History

523A	Latin America: The Colonial Era
523B	Latin America: The 19th Century
523C	Latin America: The 20th Century
524	Seminar U.S./Latin America Relations
525	Lecture U.S./Latin America Relations
526	Dictatorship in Latin America

International Studies

601	Seminar in Development
610B	Seminar on Latin America
690	Readings in Latin America

Political Science

534	Government & Politics of Latin America
535	Revolution in Latin America
579	Latin American Political Thought
590	Studies in Gov't: U.S. Policy in Latin America

Sociology

508	Latin American Society
518	Third-World Development
553	Research Problems: Belize Field Trip

Spanish

539	Modern Spanish Usage
543	Survey of Spanish American Literature
547	Themes from Spanish American Prose
548	Contemporary Spanish American Literature
560	Spanish American Civilization and Culture

Telecommunications

765	Communication and National Development

• *Southeast Asia Studies*

The program is designed for individuals who want to enrich their knowledge of this region of the world. Students entering the program are usually interested in careers in the foreign service, government, international assistance/development enterprises, or teaching. The program is especially strong in studies of Indonesia/Malaysia, Singapore, and Brunei.

A minimum of 70 quarter hours in at least three disciplines is required. At least 35 hours must come from SEA core courses in those disciplines marked with an asterisk (*) and listed below—usually a 3-2-2 range of courses. Two years of Southeast Asian language coursework, or its equivalent, is required. An additional 10 hours may come from a professional component or other electives in areas such as journalism, business, home economics, education, public administration, or Teaching English as a Foreign Language (TEFL). A minimum of two seminar courses must be taken in seminar work. The following disciplines offer courses with a Southeast Asia focus: *anthropology*, art*, business administration*, economics*, education*, geography*, history*, international studies*, interpersonal communication*, journalism*, literature*, philosophy*, political science*, and telecommunications.*

Up to 10 hours of language courses may be included in the 70 hours of work counted toward the degree.

CORE COURSES

Anthropology

585	Cultures of Southeast Asia
586	Problems in Southeast Asian Anthropology

Economics

550	Economic Development
573	Economics of Southeast Asia

Education

506B	Education and Development in Asia

Geography

538	Southeast Asia
680	Third-World Development and Environment
684B	Seminar in Regional Geography: SEA

History

544A	History of the Malay World
544B	Burma & Thailand in Modern Times
544C	Vietnam
545A	SE Asia to 1750
545B	SE Asia: 1750-1942
545C	Post-War SE Asia: 1942 to Present
644	Seminar: Southeast Asia
645	Southeast Asia Colloquium

International Studies

550	Focus on Malaysia
590	Tun Razak Seminar

Linguistics

795	Seminar in Malayo-Polynesian Linguistics

Literature

540	Traditional Literature of SE Asia (in trans.)
545	Modern Literature of SE Asia (in trans.)

Philosophy

570	Hinduism
571	Buddhism
572	Islam

577	Buddhist Philosophy
691	Indonesian Themes

Political Science

540	Politics of Developing Areas
547A,B	Government & Politics of SE Asia
648	Politics of Southeast Asia

Southeast Asian Languages

571-2-3	Elementary Indonesian/Malay
574-5-6	Intermediate Indonesian/Malay
577-8-9	Advanced Indonesian/Malay

• *Communication and Development Studies*

The main curriculum emphasis is on the use of communication to promote national development and to support development projects. In addition to telecommunications, the plan of study includes multidisciplinary perspectives on national development, area studies, and training in applied research methods. Several elective areas of substantive application, ranging from economic development to new information technologies to radio and television production, to tropical public health, are incorporated into this degree and constitute the area of specialization. A field study or internship is also required. The program requires a minimum of 90 quarter hours equivalent to 19 academic courses. Normally, the student needs two years to complete the degree requirements.

REQUIRED COURSES

- 6 courses in Telecommunications
- 4 courses in field of substantive application ("minor")
- 4 courses in Area Studies, including INST 500
- 3 courses in Development
- 2 courses in Researc'h Methods or Information Processing Skills
- Completion of Field Study or Internship

Telecommunications Component:

601	Introduction to Mass Communication Research AND
602	Quantitative Research Methods in Communication OR 603 Qualitative Research Methods in Communication AND
765	Communication and National Development AND
770	Mass Communication Theories (or equivalent courses in telecommunications, interpersonal communication, or journalism) AND
586D	Media, Messages, and Social Change

Any Two Courses:

563	New Technologies
586	Writing for Training and Development
767	Comparative Systems of Telecommunications
769	International Telecommunications
JOUR 566	International Communication
INCO 510	Cross-Cultural Communication
INCO 710	Communication and Information Diffusion

Area Studies Component - see SE Asia, Africa, Latin America course lists.

Development Component - see Development Studies core list.

Research and Information Processing Tools - research courses listed under individual departments.

NOTE: This is not an exhaustive list of course offerings in the foregoing programs. There are other courses that are relevant to each program depending on the student's needs and interests. Additional courses may be added in consultation with the program director. Please refer to the individual departments for course descriptions.

The criteria for admission are a baccalaureate degree from an accredited college or university; a good undergraduate record, usually including a minimum 3.0 average in the undergraduate major; three letters of recommendation; and a two-page statement of purpose. The letters, usually from faculty with whom courses have been taken or from supervisors, should deal with the applicant's motivation, intellectual and academic capacity and potential, and work experience. The statement of purpose should give a brief history of the applicant's background, why they have chosen this particular program, and how the degree will help in the applicant's long-term career goals.

In addition, the Communication and Development Studies Program requires a curriculum vitae, and international students are required to submit TOEFL scores (minimum is 580).

The Center for International Studies is responsible for the following courses:

500 Introduction to Graduate Studies (2)
Interdisciplinary introduction to graduate study including research methodologies and nature of area studies.
Staff; F, Sp, Y; 1988-89.

550 Focus on Malaysia (5)
Introduction to geographical, historical, demographic, cultural, and political settings of Malaysia within the wider context of Southeast Asia. A survey of the historical development of Malaysia with emphasis on the period from the Second World War. The Constitution of the Federation of Malaya 1957 and subsequently the Constitution of Malaysia 1963 will be discussed. The course will focus on the National Education Policy, the National Language Policy, the formation of Malaysia, and the New Economics Policy.
Razak Chair Holder; W; Y; 1988-89.

588 Comparative Administration (4)
Designed to help students acquire skills needed to manage in cross-cultural environments. Analyzes how management style, organizational behavior, and the nature of administration vary from country to country and the extent to which culture affects administrative practices. Highlights the interdisciplinary nature of administrative issues and uses comparative international case studies and other materials.

589 Applied Research Project (4)
Designed to make students aware of the current issues of global environments. Students select a project topic from a list of preselected items that are finalized each year and conduct research on a specific issue under the guidance of a faculty advisor. Students are required to write the project individually as it applies to a country other than their native country. In addition to the written report, an oral presentation of the applied research project also is required.

590 Tun Razak Seminar Southeast Asia Studies (5)
Designed to enable the holder of the Tun Abdul Razak Chair to present his/her particular specialization. This means the content of the course could be different from year to year, depending on the discipline of the holder. The focus of the course will be on Malaysia as well as other parts of Southeast Asia.
Razak Chair Holder; Sp; Y; 1988-89.

601 Seminar in Development (5)
Interdisciplinary investigation into selected problems of development. Intended to provide interdisciplinary perspective into nature of sociological, political, economic, and psychological change in Africa, Asia, and Latin America.
Staff; W, Su; D; 1988-89.

610A,B,C Seminar in Area Studies (4-5)
Selected multidisciplinary topics in Africa, Latin American, or Southeast Asian Studies.
Staff; W, Sp; 1988-89.

690 Independent Study (1-5)
Prereq: perm.
Staff; F, W, Sp, Su; 1988-89.

695 Thesis (1-10)
Prereq: perm.
Staff; F, W, Sp, Su; 1988-89.

■ INTERPERSONAL COMMUNICATION

The School of Interpersonal Communication expects its graduates to develop a specialist's depth in the study of human communication, as well as a generalist's perspective. Individualized programs of study are emphasized, though all students are required to complete four required courses listed under each degree program.

The school offers the M.A. and Ph.D. degrees. Primary areas of study include interpersonal communication, organizational communication, and rhetorical and communication theory. Emerging areas of emphasis may be selected as primary areas of study in consultation with the student's advisory committee and with permission of the school's graduate committee.

Admission to graduate study in the school is granted to students selected on the basis of recommendations of those familiar with their academic and other work, undergraduate and graduate grade-point averages and class standings, scores on the Graduate Record Examination, and experiential and other nonformal learning.

Students with strong backgrounds in communication studies are selected as graduate teaching associates. Applicants at both the M.A. and Ph.D. levels are considered for associateships. Graduate teaching associates serve as instructors in basic courses, assist in teaching advanced courses, help with the forensic program, or join faculty in research projects.

Applications for admission are welcomed at any time. The school begins reviewing applications by late January, so early application is encouraged. April 1 is the date at which the school begins to make the majority of its financial awards to graduate students.

MASTER'S PROGRAM

M.A. students may complete their study by writing a thesis or by taking additional coursework and a comprehensive examination over all their work in lieu of a thesis. Before completing 18 hours of coursework, the student must notify the school in writing about whether they will pursue the thesis option.

At least 45 quarter hours of credit are required for the master's degree, whether thesis or nonthesis. A maximum of 12 quarter hours of graduate credit with grades of B or better may be accepted by transfer from approved institutions which offer the master's degree, provided the transferred coursework is acceptable to the student's advisory committee and is *not more than five years old.* At least 33 quarter hours of graduate credit must be earned on the Athens campus.

All M.A. students are required to take INCO 600, Introduction to Graduate Study; INCO 610, Theories of Communication; INCO 618, Seminar in Interpersonal Communication; INCO 630, Organizational Communication; and INCO 640, History of Rhetorical Theory.

In addition to a full complement of daytime offerings, each quarter the school schedules a select number of graduate courses during evening hours. Such scheduling permits completing requirements for the M.A. degree through credits earned in either daytime offerings, evening offerings, or some combination thereof. Please contact the school for further details regarding these evening offerings.

DOCTORAL PROGRAM

To be admitted unconditionally, a student must have received the master's degree or completed equivalent work (as approved by the Graduate Committee) at a duly accredited institution. If the applicant's master's degree did not include a thesis, he or she must present for evaluation by the graduate committee other evidence of his or her scholarly writing ability. Additional evidence of the student's ability to pursue study at the doctoral level is required, as documented from previous personal, professional, and academic experiences.

At least 72 quarter hours of credit beyond the master's degree (or its equivalent) are required for the Doctor of Philosophy degree, plus a satisfactory dissertation. A maximum of 16 quarter hours of post-master's degree graduate credit with B or better grades may be accepted by transfer from approved institutions which offer post-master's (doctoral level) work for application to the student's primary area, and eight hours of such work for application to each related area, provided the transfer work is not more than five years old, and is acceptable to the student's advisory committee, the graduate committee, and the associate provost for graduate studies and research. At least 48 quarter hours of doctoral credit must be earned on the Ohio University campus. At least three consecutive quarters must be spent in an institutional full-time status on the Athens campus.

All Ph.D. students are required to take INCO 600, Introduction to Graduate Study; INCO 610, Theories of Communication; INCO 618, Seminar in Interpersonal Communication; INCO 630, Organizational Communication; and INCO 640, History of Rhetorical Theory.

NOTE: Courses marked with an asterisk (*) are not offered every year.

501 Field Research Methods in Communication (5)
Prereq: 600. Development of research methods such as content analysis, participant observation, Q-analysis, questionnaire design, sampling procedures, case studies, and unobtrusive measures.
Staff.

510 Cross-Cultural Communication (5)
Analysis of processes and problems of communication as affected by national cultures; effects of differences in languages, values, meaning, perception, and thought.
Staff.

512 Principles of Message Analysis (5)*
Theory, research, and practice in analyzing human messages produced in natural settings. Survey of various coding methods: type/token ratio, content analysis, discourse analysis, and relational analysis; application of selected techniques to previously generated messages.
Staff.

530 Communication and the Campaign (5)
Processes of communication as applied in a campaign, defined as any organizational goal-oriented effort designed to influence behaviors of identifiable population. Emphasizes theory application in nonclassroom campaign situations (political, fund-raising, publicity, etc.).
Staff.

533 Applications of General Semantics (5)*
Chief formulations from general semantics and their applications to field of communication.
Staff.

540 Theories of Argument (4)
Relationship between formal logic and rhetorical systems of arguments; intensive study of fallacies and experimental findings related to study of argument.
Staff.

542 Responsibilities and Freedom of Speech in Communication (5)
Ethical and rhetorical implications of constitutional guarantees on political, social, and religious speech; analyses of significant legal cases on freedom of expression.
Staff.

570 Effective Classroom Communication for Teachers and Trainers (4)
Prereq: 1 yr teaching K-12. Focuses on interpersonal communication in classroom environment; emphasis on communication between students and teachers. Taught in workshop format only during summer session.
Staff.

571 Nonverbal Communication for Teachers and Trainers (4)
Covers nonverbal behavior of teachers and trainers in the classroom. Messages communicated by the classroom environment and how the environment shapes students' learning patterns are also covered. Taught in seminar format with small group activities to develop greater sensitivity to nonverbal communication. Readings. Offered at Chillicothe, Ironton, Lancaster, St. Clairsville, and Zanesville.
Staff.

572 Organizational Communication for Teachers and Administrators (4)
Focuses on the problems of communication within an education-oriented organization. Particular emphasis on elements that help or delay the adoption of change, conflict management, and on practical knowledge and skill for communicating successfully in an educational setting. Readings. Offered at Chillicothe, Ironton, and Zanesville.
Staff.

573 Effective Listening and Small Group Communication for Teachers and Trainers (4)
Focuses on steps to more effective listening and working in small groups for teachers and trainers. Familiarizes teachers and trainers with the keys to active listening, the stages of group development and decline, how to manage groups, and improve their cooperation and productivity. Taught in concentrated lecture-seminar format during Summer Session only. Graduate students are required to submit an additional written project after completion of the classroom sessions.

600 Introduction to Graduate Study (5)
Definition of field of communication, methods of structuring field, and research concerns within areas of field. Examination of theory and function of research. Analysis of representative types and methods of research, including reporting results.
Staff.

601 Measurement Methodology in Communication (5)
Prereq: perm. Measurement principles, instruments, and techniques in communication; problems and procedures in testing, measuring, and evaluating communicative attitudes and skills; development and availability of relevant standardized tests.
Staff.

610 Theories of Communication (5)
Prereq: perm. Survey of contemporary communication theory, emphasizing cross-disciplinary contributions to such theory.
Staff.

611 Language and Symbol Systems (5)
Prereq: perm. Role of verbal and nonverbal signs and symbols in communication. Emphasizes human symbolizing capabilities and relationships between symbolic structures and physical reality.
Staff.

612 Communication in Social Conflict (5)
Roles of communication in conflict and conflict in communication. Communication strategies for reducing or managing conflict in social situations.
Staff.

613 Communication and Persuasion (5)
Process of communication and attitude change, survey of general theories and typical research, analysis of contemporary persuasion.
Staff.

614 Negotiation and Mediation (5)
Explores communication dynamics involved in negotiating and mediating interpersonal and organizational disputes. Examines research and ethical issues relevant to communication within the contexts of negotiation and mediation.

618 Seminar in Interpersonal Communication
Provides advanced graduate students with opportunity to identify and analyze basic components of dyadic communicative system including multivariate nature of both relationships and effects.

620 Nonverbal Communication (5)
Prereq: perm. Survey of major theories and research areas in field of nonverbal communication. In-depth analysis of research in areas of student interest.
Staff.

621 Gender and Communication (5)
Prereq: 600 or equiv. Explores variations in communicative behaviors related to biological sex and psychological gender. Examines female and male communication in intrapersonal, interpersonal, small group, public, and organizational settings.
Staff.

622 Communication in the Family (5)
Prereq: 600 or perm. Examination of the communication concepts that are basic to understanding interaction in the family. Provides a framework for analysis of family communication. Explores communication issues which relate to conflict, power, intimacy, and the development of relationships. Presents a model of effective communication in the family. Consideration of verbal and nonverbal communication behaviors.
Staff.

630 Communication in Organizations (5)
Introduction to organizational communication. Specific objectives include development of historical progress, examination of major research issues such as information flow, network analysis, communication overload and underload; exploration of theoretical foundations in organizational decision making; superior-subordinate communications, organizational effectiveness and change processes.
Staff.

631 Communication Audits in Organizations (5)
Prereq: perm. Examination and discussion of literature covering methods of assessing communication in organizations. Designed to give students practical skill development through actual assessment, data analysis and interpretation, and client report preparation.
Staff.

632 Instructional Training and Development in Communication (5)
Includes philosophies of organizational development; theories of instructional design, emphasizing stages of planning implementation, and evaluation; and communication training skills, including needs assessment and evaluation, writing objectives, application of communication content, and selection of instructional modes and resources—all investigated within business, professional, and governmental organizational contexts.
Staff.

640 History of Rhetorical Theory (5)
Covers main concepts and principal figures in the history of rhetorical theory. Begins with Classical Greece and ends with Postmodernity.
Staff.

642 Modern Rhetoric (5)
Aims, tasks, and significance of rhetoric in relation to human communication processes. Distinctions among speculative, critical, canonical, and performative perspectives in rhetorical inquiry.
Staff.

643 Religious Rhetoric (5)
Prereq: perm. Pulpit oratory examined through analyses of selected clerics including Luther, Wesley, Whitefield, Beecher, Brooks, Fosdick, Sunday, Graham, and others. Rhetorical analysis of revivalism, camp meetings, social gospel, and ecclesiastical and polemic debates.
Staff.

644 The Rhetoric of Protest and Reform (5)
Prereq: perm. Rhetorical analysis and criticism of speaking during reform and revolutionary protest movements. Selected areas include American Revolution, anti-slavery debates, Populists, Progressives, labor unrest, women's rights, and civil rights agitation.
Staff.

645 The Rhetoric of the World Wars (5)*
Prereq: perm. Analysis and criticism of wartime communication, its principal modes, techniques, media, and effects. Theory and practice as reflected in WWI and II.
Staff.

646 Analysis and Criticism of Legal Rhetoric (5)*
Prereq: perm. Analysis and criticism of principal modes, types, and styles of western legal rhetorical communication as mirrored in selected cases, jurists, attorneys, decisions, and arguments, with western legal communication studies as unique mode of rhetoric focusing upon English-American jurisprudence and courtroom advocacy. Case study method employed. Critical analysis accomplished.
Staff.

647 Analysis and Criticism of Political Rhetoric (5)*
Prereq: perm. Analysis and criticism of principal modes, media techniques, and effects of western political rhetorical communication. Theory and practice as reflected in major campaigns, administrations, and movements in both open and closed societies.
Staff.

690 Independent Study (1-15)
Prereq: perm. Readings on special problems under planned program approved by advisor. Projects must be approved prior to registration.
Staff.

691 Internship (1-15)
Prereq: written proposal and perm. Experience in communication-related activities in organizational environments.
Staff.

694 Research (1-12)
Prereq: perm. Individual research on special problems. Projects must be approved prior to registration.
Staff.

695 Thesis (1-15)
Staff.

701 Research Designs in Communication (5)
Prereq: 601 or perm. Nature and selection of communicative research problems; development of strategies, techniques, and appropriate designs; critical evaluation and development of experimental and descriptive procedures.
Staff.

702 Communication Historiography I (5)
Prereq: 600 or perm. Bibliographic, analytical, and interpretive skills for dealing with published primary source materials, including letters, speech texts, and audiovisual recordings in their historical contexts. Designed to help students become skillful library users, situate a research problem in context, and analyze primary historical materials.
Staff.

703 Communication Historiography II (5)
Prereq: 702 or perm. Techniques for research using archival material; transcripts, unpublished speeches, letters, diaries, artifacts (e.g., scrapbooks, museum exhibits), memoirs, manuscripts. Readings exemplify a variety of historical philosophies. Students research an original problem of their own definition within the theme of the quarter; the writing of conference papers is encouraged. Course builds on the pedagogical skills introduced in 702 by developing students' ability to critique bibliographies, argumentation, and prose style.
Staff.

710 Communication and Information Diffusion (5)
Prereq: perm. Analysis of major approaches to data and information diffusion systems on local, regional, national, and international levels. Emphasis on acquisition analysis, and dissemination of data as information, including critical points of interface and interaction between a system and its users.
Staff.

721 Communication Process in Small Groups (5)
Theory and research in group social system, group modification of individual judgment, leadership styles, group vs. individual goals, and intragroup lines of communication in small problem-solving and learning groups.
Staff.

722 Listening Behavior: Theory and Research (5)
Analysis and evaluation of listening process in terms of theory, research, and operational characteristics.
Staff.

730 Communicative Process in Organizations (5)
Prereq: Ph.D. student or perm. Interaction between organizational structure and communication within organizations. Emphasis on theoretical and methodological analysis. Primary focus on conducting major research project.
Staff.

733 Organization Communication Consulting: Foundational Perspectives (5)
Prereq: Ph.D. student and perm. A focus on theoretical perspectives to organizational communication consulting and organizational development. Review of theory and research on communication training, consulting practices, communication variables involved in the client/consultant relationship, as well as intervention techniques.
Staff.

740 Rhetorical Criticism (5)
Theories and methodologies of selected modern critics. Exploration of interdisciplinary dimensions in criticism of rhetorical interactions. Class and individual projects.
Staff.

780 Topics in Communication (1-5)
Prereq: perm. Communication topics of interest to faculty and students not covered by regular classes. Each offering will consider different topic on one-time-only basis. May be repeated.
Staff.

790 Interdisciplinary Seminar (3-12)

794 Research (3-12)
Prereq: perm. Individual research on special projects. Projects must be approved prior to registration.

895 Dissertation (1-24)

■ ITALIAN

(See Foreign Languages and Literatures)

■ JOURNALISM

The E. W. Scripps School of Journalism offers a Master of Science degree and, in cooperation with the School of Telecommunications, the Doctor of Philosophy degree in mass communication (see Mass Communication).

Admission is based on the student's academic and professional background. To assist the School of Journalism in evaluating qualifications, each applicant must submit his or her scores on the Graduate Record Examination, a resume, three letters of recommendation, official transcripts from all colleges attended, and a statement of 500 words or less about why he or she wants to attend graduate school. International students also are required to send in a TOEFL score. Applicants need not have an undergraduate major in journalism.

Anyone seeking financial aid for the following academic year should apply by January 15.

The master's program is designed to provide opportunities for students to study professional journalism or to prepare themselves for further academic work. Required coursework in both areas is a blend of professionally oriented classes with mass communication principles, theory, and research.

The flexibility of the program allows professionally oriented students to specialize in newspaper, magazine, or broadcast journalism; public relations; advertising; or visual communication. The master's program requires 49 hours and usually involves 15-18 months for completion. Required courses are as follows:

Master's Degree Core: JOUR 501, 511, 512, 803, and 806.

Advanced Research (choose one): JOUR 808, 811, 816, 821, or 830.

Topics Seminar (choose one): JOUR 635, 812, 814, 815, 850, 866, or 871.

Research (choose one): A thesis, for six hours' credit, involving a carefully designed research project conducted in the traditional academic format, or a professional project of publishable quality.

In addition, students are required to take undergraduate reporting, editing, and graphics if they have not previously taken such courses. Graduate credit will not be earned for these background classes.

Some of these required classes may be waived if the student presents evidence that he or she has completed equivalent coursework or has equivalent professional experience. If required classes are waived, other graduate classes must be taken to make up the number of hours.

Graduate students are required to maintain an accumulative grade-point average of at least 3.0. Only graduate credits with a grade of B- or above will count toward a degree.

501 Introduction to Graduate Study (1)
Required of all new graduate students.
Staff; F; Y.

511 Newspaper and Communication Law (3)
Principles and case studies in communication law, constitutional guarantees, libel, privacy, contempt, privilege, copyright, and government regulatory agencies.
Evarts, Stempel; W; Y.

512 Ethics, Mass Media, and Society (3)
Ethics and social responsibility of journalists or other mass communicators. Professional codes, responsibility of media for social change, reaction to political and economic pressures.
Bugeja, Haggerty, Lambert; F; Y.

521 Graphic Production Processes (5)
Prereq: perm. Advanced study of all processes for reproducing printed communication. Theory and lab.
Hodges; D.

522 Advertising Production (4)
Techniques and problems in methods of advertising production.
Richardson; D.

524 Direct Response Advertising (3)
Prereq: perm. Introduction to the scope of direct marketing and direct response media, including direct mail, broadcast and print advertising, catalogs, co-ops, telemarketing, inserts, and video cassettes.
London; Sp; Y.

525 Photojournalism (3)
Prereq: perm. Basic principles and practices of photojournalism for newspapers, magazines, and television. Students shoot, process, and print pictures on assignment.
Scott; D.

526 Advanced Photojournalism (3)
Prereq: 525. Continuation of 525.
Scott; D.

530 Magazine Editing and Production (4)
Prereq: 221. Theory of magazine editing, production, and publishing with lectures on various types of magazines available today and analysis of audiences they serve. Formulas for publishing, editorial content, and article selection; illustration and layout, and technical procedures including sales. Each student will prepare a dummy magazine of his or her own design.
Baird, Bernt, Bugeja, Hodges, Westfall; F, W, Sp, Su; Y.

531 Magazine Editing and Production Practice (3)
Prereq: 430 or 530. Practice course where students apply their knowledge to production of quarterly magazine done regularly by School of Journalism. Each student assigned specific position on magazine.
Westfall; F, W, Sp; Y.

532 Specialized Business Magazines (3)
Prereq: 531 or perm. Career opportunities in magazine journalism revealed by in-depth studies of professional, business, and industrial magazines. Course considers publishing problems through case studies.
Staff; F; Y.

535 Picture Editing (3)
Prereq: perm. Principles and practices of picture editing. Includes consideration of picture sources, assignment, and handling; photographic techniques and aesthetics; legal and ethical factors; visual idiosyncrasies of various media.
Scott; D.

536 Advanced Picture Editing (3)
Prereq: 535. Continuation of 535.
Scott; W, Sp; Y.

541 Magazine Feature Writing (4)
Writing and marketing factual magazine feature articles of various types. Finding subjects, researching, writing articles, and surveying markets.
Bugeja, Westfall; F, W, Sp, Su; Y.

542 Advanced Magazine Feature Writing (3)
Writing and marketing magazine articles. Emphasis on specialized markets and new trends in industry. Students attempt actual assignments for magazines nationwide.
Bugeja, Haggerty, Westfall; Sp; Y.

543 Advanced Magazine Editing (3)
Prereq: 531. Students edit real manuscripts, from the how-to to personal narratives. They learn to recognize weaknesses, devise solutions, and interact with writers. Ethical dilemmas posed by more experimental forms of magazine journalism also are covered.
Staff; D.

550 Advertising Copy Writing (3)
Effective persuasion in print and broadcasting.
Helitzer, London, Peters, Richardson; F, W, Sp, Su; Y.

552 TV Newsfilm Production and Editing (3)
Prereq: perm. Principles and practices of TV newsfilm production and editing.
Staff; F, W, Sp; Y.

555 Seminar in Broadcast News (3)
Discussion of problems—operational, social, economic, legal, and ethical—faced by broadcasters reporting public affairs.
Shoultz, Stewart; F, W, Sp; Y.

558 TV News Practice (4)
Prereq: 552. Practicum in preparation and presentation of TV newscast. Students select news material including video, format, and script for newscast, then deliver on air. Students rotate through various newsroom positions during qtr.
Stewart; F, W, Sp, Su; Y.

559 Advanced TV News Practice (3)
Prereq: 552, 558. Advanced practicum in preparation and presentation of TV newscast. Students involved in selecting, editing, scripting, and formatting for on-air newscasts. Students also appear on air and assume management responsibilities.
Stewart; F, W, Sp, Su; Y.

561 Specialized Journalism (3)
Seminar approach to individual study of journalistic areas of special interest to individual students.
Staff; D.

564 Reporting of Public Affairs (3)
Problems of preparing in-depth, interpretative, and analytical reports on public affairs for mass media, governmental reporting, and contemporary controversial issues.
Greenwald, Hodson, Izard; F, W, Sp; Y.

565 The Editorial Page (3)
Editorial page in opinion information. Problems of content selection and presentation. Extensive writing of analytical and persuasive editorials and interpretative articles in depth.
Evarts, Lambert; F, W; Y.

566 International Mass Media (4)
Development and operations of world mass communication channels and agencies. Comparative analysis of media, media practices, and flow of news throughout world. Relation of communication practices to international affairs and understanding.
Cooper, Kliesch; F; Y.

567 Foreign Correspondence (4)
Prereq: 231 or perm. Graduate course in advanced international reporting for those who have lower-level reporting classes or experience. Students write reports of U.S. for newspapers abroad. Selected students eligible for internships abroad.
Cooper; F, W; Y.

568 Column Writing (3)
Prereq: perm. The study of newspaper columnists, past and present, with extensive writing of various kinds of columns.
Lambert; Sp; Y.

570 Sportswriting (3)
Prereq: perm. A look at sports writing from lead to 30—the good, the bad, and the ugly of life in a sports press box. Course builds on a student's newswriting and editing skills. Offers advice on the art of sportswriting, and students are assigned to practice the art by covering live events.
Staff; D.

571 Public Relations Principles (5)
Public relations planning and techniques; selected communication studies and theories. Polling, defining objectives, and analysis of public relations messages.
Culbertson, Morah; F, W; Y.

572 Advanced Public Relations (4)
Planning public relations programs and projects, including selection of audiences, messages and media, and evaluation of effects. Project in area of student's interest.
Helitzer; W, Sp; Y.

581 Print Media Management (3)
Problems in publishing affecting all departments.
Staff; D.

582 Broadcast Advertising and Management (4)
Peters, Reese; F, W, Sp; Y.

583 Magazine Publishing and Management (3)
Prereq: 530. An introduction for editors to the topics of audience, circulation, industry, trends, reposition, and launching of magazines. History of the rise and fall of publishing empires, including the financial, legal, and ethical realities that shaped them.
Staff; D.

584 Supervising School and College Publications (4)
Conference course for advisors of high school and college newspapers, magazines, and yearbooks. Problems relating to staff selection, content of publications, copy, layout, photography, printing, advertising, and business phases.
Staff; D.

585 Journalism in the Secondary School Curriculum (4)
Prereq: 9 hrs of journalism. Intensive study and analysis of appropriate content for high school journalism courses. Planning course outlines and curricula.
Staff; D.

586 Advertising Campaigns (5)
Prereq: perm. Thorough understanding of basic elements of advertising campaigns. Includes creation of campaign.
Helitzer, Peters, Reese; F, W, Sp; Y.

601A Graphics of Communication (5)
Creative and practical aspects of typography, layout, and design of printed communication. Does not count toward M.S.J. or Ph.D.
Pittman, Hodges; F, W, Sp, Su; Y.

601B News Reporting (4)
Prereq: typing proficiency and English proficiency exam. Methods of gathering and evaluating news and writing typical news stories. Practice work in covering assignments and preparing copy. Does not count toward M.S.J. or Ph.D.
Haggerty, Lambert, Washburn; F, W, Sp, Su; Y.

601C News Editing (4)
Prereq: B or better in 601B, English proficiency exam. Copyreading, headline writing, news selection, and layout of newspages. Does not count toward M.S.J. or Ph.D.
Evarts, Stempel, Morah; F, W, Sp, Su; Y.

601D Advertising Principles (5)
Major factors in development of advertising programs. Does not count toward M.S.J. or Ph.D.
Helitzer, Peters, Richardson; F, W, Sp; Y.

601E Photojournalism (3)
Prereq: English proficiency exam, 601B, or perm. Basic principles and practices of photojournalism for newspapers, magazines, and television. Includes consideration of roles of photographers and picture editors in communication and their relationships with other members of editorial team and mechanical departments of publications. Students shoot, process, and print pictures on assignment. Does not count toward M.S.J. or Ph.D.
Scott; F, W, Sp; Y.

635 Seminar in Picture Editing (3)
Prereq: perm. Study of picture-editing practices in newspapers, magazines, and television.
Scott; W; Y.

662 Graduate Internship (1-15)
Prereq: perm. Professional project for students not choosing to do a thesis.
Staff; F, W, Sp, Su; Y.

665 Professional Project (1-15)
Prereq: perm. Professional project for students not choosing to do a thesis.
Staff; F, W, Sp, Su; Y.

691 Research in Journalism and Communications (1-15)
Prereq: perm.
Staff; F, W, Sp, Su; Y.

695 Thesis (1-15)
Staff; F, W, Sp, Su; Y.

790 Independent Study (1-4)
Prereq: written proposal and perm prior to registration. Student can pursue personal scholarly interests under faculty supervision.
Staff; F, W, Sp, Su; Y.

792 Seminar (3-5)
Selected topics of current significance. May be repeated with different topics.
Staff; F, W, Sp, Su; Y.

803 Seminar in Mass Communication Theory (5)
Communication process, interpersonal and mediated, and possible barriers to effectiveness. Review of literature on effects of mass communication on individuals and groups, contrasting channels, and message structures. Media as social and economic institutions.
Culbertson; F, W; Y.

806 Research Methods (5)
Techniques for study of communication content, message sources, audiences, and effects.
Stempel; F; Y.

808 Legal Research (4)
Prereq: 511. The study of the legal literature relative to First Amendment, including that involving speech, the press, broadcast, and the broad area of social and political communication. Each student learns to use legal reporters and documents. Electronic searching and Shepardizing are taught. Field trips to Columbus are necessary. Each student prepares an extensive legal bibliography in a First Amendment area of interest.
Evarts; W; Y.

811 Historical Research in Journalism (5)
Research in mass communication history, individual projects and readings, application of historiographic methods.
Washburn; W, Sp; Y.

812 Government and Mass Communication (4)
Communication and political order. Theory and structure of democratic and totalitarian communication systems, relationships between government and mass communication in modern world.
Evarts; D.

814 Literature in Journalism (4)
Directed reading and discussion in literature.
Stempel; Su; Y.

815 Seminar in Theory of Freedom of the Press (4)
Prereq: 511. Historical and philosophical development of concept of free expression and its relationship to development of Anglo-American system of information flow. Contrasting ideologies and their evolution. Implications of these theories in contemporary states.
Izard; D.

816 Seminar in Mass Media Research (5)
Prereq: 806. Students present research ideas to seminar, discuss progress and problems, report findings, and defend projects before group. Emphasis also on scaling and measurement, nonparametric statistics, research strategy, and nature and function of theory in mass communication research.
Culbertson; Sp; Y.

821 Seminar in Content Analysis (4)
Methods of studying mass media content; individual projects and readings.
Stempel; Sp; Y.

830 Magazine Research and Development (4)
Investigation into and seminar discussion of role of magazine in American society. Problems of magazine publishing, problems of magazine editing, and structure and nature of magazine industry in U.S. Major research project.
Staff; F; Y.

850 Seminar in Advertising Copy (4)
Human information processing as it affects advertising copy.
Staff; D.

866 Seminar in International Mass Media (5)
Prereq: ,566, 803. Directed research and reading applied to problems of international communication and comparative foreign journalism. Each student studies press of selected nations or areas in which he or she has special interest.
Cooper, Kliesch; W; Y.

871 Public Relations Problems and Programs (4)
Prereq: 571, 572. Overall planning and operation of public relations programs in government, industry, and educational and nonprofit organizations. Analysis and seminar discussion of problems and policies in such institutions. Case method used in conjunction with individual field studies conducted by class members.
Culbertson; Sp; Y.

895 Dissertation (1-15)
Staff; F, W, Sp, Su; Y.

LATIN

(See Foreign Languages and Literatures)

LATIN AMERICAN STUDIES

(See International Affairs)

LINGUISTICS

The Department of Linguistics offers two programs, each of which leads to a Master of Arts in linguistics. Instruction in Teaching English as a Second or Foreign Language (TESL/TEFL) is for those who wish to teach nonnative speakers of English in domestic or international settings. The general linguistics program gives students basic training in linguistic analysis, including such areas as sociolinguistics, psycholinguistics, and computational linguistics. It is designed primarily for students who intend to do doctoral work in theoretical linguistics, but may serve as a base for further study in English language, education, psychology, and other fields where an understanding of the structure and nature of language is necessary. A thesis is optional for the TESL/TEFL program, but required for the general program.

Admission for graduate study in linguistics requires no specific undergraduate preparation, but a background in English, foreign language, speech, psychology, mathematics, or philosophy is particularly relevant. Transcripts of all previous study must be submitted and must indicate strong promise of the applicant's success in graduate study. The applicant's record also must include evidence of two years of college-level study of foreign language. Admission is possible for applicants who cannot meet this requirement, but it must then be satisfied by concurrent nondegree study. Nonnative speakers of English may use their study of English to satisfy this requirement. Teacher training and experience are desirable as preparation for native students intending to follow the TEFL curriculum. For nonnative applicants to the TEFL program, both teacher training and an undergraduate major in English are recommended.

While there is no specific deadline for submission of application materials, new applicants are normally admitted only in the fall quarter. Applicants for financial aid for the following academic year must apply by April 1.

Validation to teach ESL in Ohio public schools is also offered (as an endorsement added to certification in another field); required courses are LING 550, 575, 581, 583, six credits of 510, and EDCI 505. A national specialty area test also must be passed. The program can be completed in two summers and does not require admission to the linguistics program.

Specific information about the programs and requirements may be obtained by writing to the Chair, Department of Linguistics, Ohio University, Athens OH 45701-2979.

510 Language Teaching Practicum (3)
Supervision of graduate student teaching. Required of all MA-TEFL majors and all teaching associates.
Staff; F, Su; Y.

520 Linguistics and Semiotics (4)
Prereq: 550 or perm. Analysis and interpretation of cultural sign systems from the perspective of linguistic theory and methodology.
Flanigan; F; D.

540 Introduction to Bilingualism (5)
Prereq: 550 or perm. Introduction to basic aspects of bilingual education from legal, sociological, linguistic, and educational perspectives.
Koda; Sp; Y.

545 Instructional Materials in Bilingualism (5)
Prereq: 540 or perm. Analysis and creation of bilingual teaching materials.
Staff; D.

550 Introduction to General Linguistics (5)
Technical introduction to linguistics, devices of language description, and methods of linguistic analysis.
Staff; F, W, Sp, Su; Y.

551 Computers for Language Teaching I (4)
Prereq: 550. Introduction to uses of computers for language teaching, software selection, and creation of supplementary computer-assisted language learning (CALL) materials.
Soemarmo; F, Su; Y.

552 Computers for Language Teaching II (4)
Prereq: 551 and 580 or ML 545. Creation of CALL materials using authoring packages, authoring languages, or BASIC programming language.
Soemarmo; W, Su; Y.

553 Computers for Language Teaching III (4)
Prereq: 552. Introduction to development of CALL materials using speech synthesis, interactive audiotape, videotape, or videodisc player.
Soemarmo; Su; Y.

555 Introduction to Graduate Study in Linguistics (3)
Introduction and orientation to field of linguistics and its research resources.
Staff; F; Y.

560 Phonology (5)
Introductory course in analysis of sound systems of natural languages.
Coady; F; Y.

565 Theories of Phonology (5)
Prereq: 560. Latest developments in phonological theory, concentrating on theory of generative phonology in contrast with classical phonemic theory.
Bond; W; Y.

570 Syntax (5)
Introduction to theories and applications of grammatical analysis.
McGinn, Soemarmo; W; Y.

572 Theories of Grammar (5)
Prereq: 570. Study of competing contemporary models of grammatical description.
McGinn, Soemarmo; Sp; Y.

575 Theories of Language Learning (5)
Prereq: 550. Theories of 1st and 2nd language acquistion and their applications to development and evaluation of language teaching methodology.
Flanigan; W, Su; Y.

580 TEFL Theory and Methodology (5)
Prereq: 550, 575. Second language teaching theory and methodology, with emphasis on teaching English as foreign language.
Anderson; W, Su; Y.

581 Methods and Materials in TESL (5)
Prereq: 550, 575. Introduction to techniques of teaching English in a second language context, with emphasis on the creation and evaluation of instructional materials for public school ESL.
Staff; D.

582 Materials in TEFL (5)
Prereq: 550, 575, 580. Theory and practice of analysis, evaluation, and creation of instructional materials for teaching English as foreign language.
Anderson; Sp, Su; Y.

583 Proseminar in TEFL: Testing (5)
Prereq: 582. Advanced research in special problems in testing English as a second or foreign language.
Anderson, Mickelson; Sp; Y.

585 Historical Linguistics (5)
Prereq: 560, 570. Study of genealogical and typological classification of languages, methods of historical analysis, and change in language systems.
Bond; Sp; Y.

590 Sociolinguistics I (5)
Prereq: 550 or perm. Language varieties and their social functions with implications for educational policy and national language planning.
Flanigan; F; Y.

591 Sociolinguistics II (5)
Prereq: 590 or perm. Introduction to interrelationships between language and social groups.
Staff; D.

595 Seminar in Area Linguistics (5)
Prereq: perm. Research on particular aspects of languages of given area.
McGinn; D.

600 Studies in Linguistics (1-4)
Prereq: perm. Directed individual investigation of particular area of interest in linguistics.
Staff; F, W, Sp, Su; Y.

620 Research in Linguistics (5)
Prereq: 575. Introduction to aspects of research design in applied linguistics.
Bond, Koda; W; Y.

640 Topics in Applied Linguistics (5)
Prereq: 575. Critically examines basic assumptions, approaches, and methods of particular subfields of applied linguistics.
Staff; W; Y.

652 Computational Linguistics (3)
Prereq: 550. Application of computers to linguistic research and teaching.
Soemarmo; D.

661 Phonological Structures of English (4)
Prereq: 550, 560. Introduction to pedagogical issues related to the teaching of listening and speaking in ESL/EFL settings.
Coady; Sp; Y.

671 Syntactic Structures of English (4)
Prereq: 570. Introduction to pedagogical issues related to the teaching of English grammar in ESL/EFL settings.
Anderson; F; Y.

675 Linguistic Semantics (5)
Prereq: 570. Semantic aspects of standard theory in generative grammar.
Soemarmo; W; Y.

682 Proseminar in TEFL (5)
Prereq: 620. Research and writing on a special problem in teaching English as a second or foreign language.
Staff; D.

685 Proseminar in Applied Linguistics: Reading (5)
Prereq: perm. Group and individual research in the theories and applications of reading research.
Anderson, Coady, Koda; Sp; Y.

690 Languages in Contact (4)
Prereq: 560, 570. Social, psychological, and pedagogical consequences of language contact, with emphasis on linguistic transfer, borrowing, and pidginization and creolization.
Staff; D.

695 Thesis (5-10)
Prereq: 572. Advanced research culminating in thesis.
Staff; W, Sp; Y.

696 Field Methods (5)
Prereq: 560, 570, or perm. Methods of eliciting, transcribing, organizing, and analyzing linguistic data.
Bond, McGinn; Sp; Y.

699 Proseminar in Linguistics (5)
Prereq: 675. Individual research and writing in general linguistics.
Staff; D.

760 Seminar in Phonology (5)
Prereq: perm. Research on selected topics in phonological theory.
Bond, Coady; D.

775 Seminar in Linguistic Semantics (5)
Prereq: 675. Survey of contemporary semantic theories.
Soemarmo; Sp; D.

800 Readings in Linguistics (2-5)
Prereq: perm. Directed readings for advanced students.
Staff; F, W, Sp; Y.

■ MALAYSIAN

(See Foreign Languages and Literatures)

MASS COMMUNICATION

The E.W. Scripps School of Journalism and the School of Telecommunications jointly offer a doctoral program in mass communication. Students may work toward a Ph.D. in mass communication with emphasis on telecommunications, journalism, or mass communication research.

The minimum requirements for the doctorate are a total of 135 quarter hours of graduate work, including previous work on the graduate level which has been accepted for transfer. The hours include up to 15 quarter hours of credit for the dissertation; a major of at least 54 quarter hours (other than dissertation) in mass communication; at least 18 quarter hours in a related area outside the College of Communication; distribution of the remaining hours, up to a total of at least 135, among courses within or outside the college which the student, with the approval of his or her guidance committee, believes will contribute to his or her professional competence; and two scholarly disciplines (e.g., statistics, historiography) or intensive proficiency in one scholarly discipline.

The Ph.D. program in mass communication at Ohio University is highly student oriented. Rather than conforming largely to a common set of requirements, each student chooses his or her own program of study (with the advice and approval of his or her guidance committee) according to needs determined by the student's personal and career goals.

Because there are minor differences in the programs of the schools cooperating in the mass communication program (for example, the School of Telecommunications offers three sequences at the doctoral level: international telecommunications studies, critical studies, and media studies; journalism focuses on content analysis, audience research, legal and historical study). Those who wish to make application should contact the graduate coordinator of the school through which entry is sought.

Ordinarily, new doctoral students are admitted only in the summer or fall. The application deadline is February 15.

For course offerings, see listings under Journalism and Telecommunications.

MATHEMATICS

The Department of Mathematics offers the Master of Science degree and the Doctor of Philosophy degree. At the master's level, programs are available in applied mathematics, computer science, mathematics for secondary school teachers, and pure mathematics. At the doctoral level, students may specialize in algebra, analysis, topology, and applied mathematics. The principal feature of graduate study in mathematics is the possibility of designing a study plan to meet an individual's needs and interests.

To be admitted to graduate study, the applicant should have an undergraduate average of at least a B (3.0 on a 4.0 scale). The undergraduate program of those students who plan to pursue the study of pure or applied mathematics should have included advanced calculus and junior or senior-level courses in abstract and linear algebra. Prospective computer science majors should have completed at least a calculus sequence, differential equations, PASCAL, and assembly language. Secondary education majors should have completed the calculus sequence and courses in geometry and algebra. If a student is admitted with deficiencies, he or she will be expected to make up the deficiencies during the first year.

The Master of Science degree may be taken with or without a thesis—no examination is required. Under the nonthesis option for pure and applied mathematics majors, the minimum amount of coursework is 45 quarter hours, half of which should be earned in course sequences numbered 600 or higher. If most or all of the student's work is on the 500 level, the graduate committee may require more than 45 hours, but not over 60. (The usual requirement is 55 hours.) The coursework should include at least two mathematics sequences, e.g., algebra, analysis, topology, etc.

Students pursuing the computer science option must complete a minimum of 56 graduate hours distributed in a manner to assure a sound program of study. Full-time students normally complete the program in four quarters, while graduate associates may take two years.

Specific minimum requirements for the computer science option are as follows: 12 hours of mathematics sequence (see below), 4 hours of mathematics in addition to a sequence, 30 hours of computer science including one concentration described below, and 10 hours of electives in computer science or mathematics or a research project.

Following are the acceptable mathematics sequences for this degree program: MATH 511, 513A,B Linear and Abstract Algebra; MATH 544, 545, 546 Numerical Methods; MATH 550A,B,C Mathematical Statistics; MATH 560A,B,C Advanced Calculus; MATH 613A,B,C Abstract Algebra; MATH 660A,B,C Real Analysis.

Following are the areas of concentration in computer science: CS 504, 506, 510 Theoretical Computer Science; CS 511, 512, 613 Concurrent and Parallel Processing; CS 542, 544, 558 Operating System and Communications; CS 562, 564, 568 Information Retrieval and Data Bases; CS 580, 582, 583 Artificial Intelligence; CS 657A,B,C, 612 Software Engineering and Real Time Systems.

Each student, with the assistance of a faculty advisor, must submit a plan of study, approved by the graduate chair, by the end of his or her first quarter. Any changes to this study plan must be approved by the faculty advisor and by the graduate chair at least one quarter before the student applies for graduation.

The Department of Mathematics, together with the College of Education, offers a joint program for secondary school teachers. The master's degree may be taken either in the College of Education or in the Department of Mathematics. A student taking this program should expect at least half of his or her credits to be earned in mathematics. Topics studied are geometry, algebra, number theory, and analysis. A minimum of 50 hours is required.

There are no specific courses required for the Ph.D. degree, but each student must pass a comprehensive examination and write an acceptable dissertation.

The dissertation is expected to be a scholarly work demonstrating the student's ability to understand, organize, improve, and present mathematical ideas of outstanding importance, depth, or interest. It should be worthy of publication.

The Department of Mathematics encourages its students to develop the ability to read mathematics in those languages which predominate the literature of the discipline. Students in post-master's courses will be expected to understand mathematics written in one or more of the following languages: French, German, or Russian.

All graduate-level computer science courses, except for 521, 522, and 599, may be used to satisfy requirements for a graduate degree in mathematics.

Qualified applicants may apply for admission for any quarter. Applicants for financial aid for the following academic year must submit application materials by March 1, although late applications will be considered if vacancies exist.

500 History of Mathematics (4)
Main lines of mathematical development in terms of contributions made by great mathematicians: Euclid, Archimedes, Descartes, Newton, Gauss, etc.

506 Foundations of Mathematics II (4)
Introductory topics in set theory and axiomatic development of real number system.

507 Number Theory (4)
Prereq: 307 or perm. Topics in number theory.

510 Matrix Theory (4)
Primarily intended for science and engineering majors. Topics include matrix algebra and matrix calculus, matrix solutions of systems of linear equations, eigenvector and eigenvalue problems, quadratic forms, and inner product spaces.

511 Linear Algebra (4)
Vector spaces and linear transformations; matrices and determinants; characteristic roots and similarity; dual spaces; classification of quadratic and Hermitian forms.

512 Introduction to Algebraic Coding Theory (4)
Prereq: 211, 410. Encoding and decoding. Vector spaces over finite fields. Linear Codes, parity-check matrices, syndrome decoding, Hamming Codes, and Cyclic Codes.
Staff; W. Su; Y.

513A Introduction to Modern Algebra (4)
Prereq: 511 or equiv mathematical maturity. Groups, permutation groups, subgroups, normal subgroups, quotient groups. Conjugate classes and class equation formula and its application to p-groups. Fundamental theorem on homomorphisms.

513B Introduction to Modern Algebra (4)
Prereq: 513A. Fundamental theorem on finite abelian groups and its consequences. Cauchy theorem and first Sylow theorem. Polynomial rings. UFD and Euclidean domains. Maximal ideals. Algebraic extensions and splitting fields. Fundamental theorem of Galois theory.

529 Topics in Mathematics of Elementary and Secondary Schools (1-5)
Prereq: perm. Selected topics related to teaching of mathematics in grades K-12. (May be repeated for credit.)

539 Topics in Geometry (1-5)
Prereq: perm of grad chair and instructor. When demand is sufficient, a course in some phase of geometry will be offered under this number. (May be repeated for credit.)

540 Vector Analysis (4)
Vector algebra and its applications. Vector calculus and space curves. Scalar and vector fields, gradient, divergence, curl, and Laplacian. Line and surface integrals, divergence theorem, Stoke's theorem, and Green's theorem.

541 Fourier Analysis and Partial Differential Equations (4)
Representation of functions as sums of infinite series of trigonometric functions, Bessel functions, Legendre polynomials, or other sets of orthogonal functions. Use of such representations for solution of partial differential equations dealing with vibrations, heat flow, and other physical problems.

542 Theory of Linear and Nonlinear Programming (4)
Prereq: 510 or equiv, computer programming experience desirable. Minimization of functions subject to equality and inequality constraints. Kuhn-Tucker theorem, algorithms for function minimization, such as steepest descent and conjugate gradient, and penalty function method. (Not a course in computer programming.)

543 Mathematical Modeling and Optimization (4)
Prereq: 211, 340, or 410, FORTRAN. Differential equation models of wide variety of physical, social, and biological phenomena presented. Qualitative analysis introduced and used to investigate models. Optimal criteria incorporated to convert models to optimal control problems. Pontriagin's maximal principle used to find analytic solutions. Numerical solutions to optimal control problems also treated.

544 Introduction to Numerical Analysis (4)
Prereq: CS 521 and undergrad course in differential equations. Iterative methods for solving nonlinear equations, polynomial interpolation and approximations, numerical differentiation and integration, numerical solution of differential equations, error analysis.

545 Advanced Numerical Methods (4)
Prereq: 541 and 544 or EE 778 and CHE 501. Initial and boundary value problems; numerical solutions of parabolic, elliptic, and hyperbolic equations; stability; error estimates; applications to engineering problems. (Also offered as ET 545.)

546 Numerical Linear Algebra (4)
Prereq: MATH 510 and FORTRAN. Floating point arithmetic, numerical solution of systems of linear equations using Gaussian elimination and its variants, numerical techniques for eigenvalues, error analysis, and implementation of algorithms on computer.

549 Advanced Differential Equations (4)
Prereq: An undergrad course in differential equations and 510 or 511. Introduction to theory of ordinary differential equations with special attention to oscillation, plane autonomous systems, Liapunov theory, and quadratic functionals.

550A Theory of Statistics (4)
Probability distributions of one and several variables, sampling theory, estimation of parameters, confidence intervals, analysis of variance, correlation and testing of statistical hypotheses.

550B Theory of Statistics (4)
Prereq: 550A. Continuation of 550A. See 550A for description.

550C Theory of Statistics (4)
Prereq: 550B. Continuation of 550B. See 550A for description.

551 Stochastic Processes (4)
Prereq: 550B. Markov chains, Poisson process, birth and death process, queuing, and related topics.

560A Advanced Calculus (4)
Prereq: undergrad course in introductory analysis. Critical treatment of functions of single variable. Emphasis on topics not treated in undergrad introductory analysis course, such as compactness, nested intervals, deeper properties of continuous functions, Riemann-Stieltjes integration, and uniform convergence.

560B Advanced Calculus (4)
Prereq: 560A and 511. Primarily devoted to study of differential calculus in n-space. Topics include review of inner product spaces and linear transformations, elementary topology of plane, limits and continuity of functions of several variables, directional derivative, differential, chain rule, and implicit function theorem.

560C Advanced Calculus (4)
Prereq: 560B. Primarily devoted to study of integral calculus in n-space. Riemann-Darboux integral, Jordan content, iterated integrals, transformation of integrals, differential forms and their integrals.

570 Applied Complex Variables (4)
Analytic and harmonic functions, Cauchy integral and residue theorems, contour integration, Taylor and Laurent expansions, conformality and linear transformations with applications.

580A Elementary Point Set Topology (4)
Topology of Euclidean spaces and general metric spaces.

580B Elementary Point Set Topology (4)
Prereq: 580A. Introduction to general topological spaces.

599 Selected Topics in Mathematics (1-15)
Prereq: perm of grad chair. (May be repeated for credit.)

600A Set Theory (5)
Prereq: perm. Introduction to axiomatic set theory; ordinals and cardinals; equivalents of axiom of choice.

600B Set Theory (5)
Prereq: 600A. Continuation of 600A. See 600A for description.

613A Abstract Algebra (5)
Prereq: 513B. Groups, rings and fields, Jordan-Holder theorem, structure theorem for finitely generated abelian groups, integral domains, principal ideal rings, modules, linear algebras, field extensions, and Galois theory.

613B Abstract Algebra (5)
Prereq: 613A. Continuation of 613A. See 613A for description.

613C Abstract Algebra (5)
Prereq: 613B. Continuation of 613A-B. See 613A for description.

630A Tensor Analysis on Manifolds (5)
Prereq: 511, 560C. Manifolds, tensor algebra, vector analysis on manifolds, differential forms, exterior derivatives, Stokes theorem, Riemannian and semi-Riemannian manifolds, curvature and torsion tensors.

630B Tensor Analysis on Manifolds (5)
Prereq: 630A. Continuation of 630A. See 630A for description.

630C Tensor Analysis on Manifolds (5)
Prereq: 630B. Continuation of 630A-B. See 630A for description.

640A Numerical Analysis (5)
Prereq: 511, 570. Approximation by piecewise polynomial functions, variational principles, variational formulation of partial differential equations. The Rayleigh-Ritz-Galerkin method, convergence of approximations, time-dependent problems, isoparametric elements and nonconforming finite element methods, applications.

640B Numerical Analysis (5)
Prereq: 640A. Continuation of 640A. See 640A for description.

640C Numerical Analysis (5)
Prereq: 640B. Continuation of 640A-B. See 640A for description.

641A Methods of Applied Mathematics (5)
Prereq: 560C, 510 and 340, or perm. Course contents vary. (May be repeated for credit.)

641B Methods of Applied Mathematics (5)
Prereq: 641A or perm. Course contents vary. (May be repeated for credit.)

641C Methods of Applied Mathematics (5)
Prereq: 641B or perm. Course contents vary. (May be repeated for credit.)

642A Optimization Theory (5)
Prereq: 560A,B,C; 510 and 340 or perm. Classical problems of calculus of variation; Euler-Lagrange, Dubois-Reymond, Legendre, and Weierstrass necessary conditions; formulation of classical problems as nonlinear programming problems in function space.

642B Optimization Theory (5)
Prereq: 642A, 660C, FORTRAN, or perm. Numerical solutions of boundary value problems; formulation and solution of optimal control problems with set, equality, and inequality constraints; applications to economics, classical mechanics, and engineering.

642C Optimization Theory (5)
Prereq: 642B. Pontriagin's maximal principle is derived and applied to optimal control problems. Numerical solutions considered more fully.

645A Differential Equations (5)
Prereq: 560C, 510, 541 or perm. Gronwall's inequality; existence and uniqueness; linear equations; autonomous equations; periodic solutions; stability; characteristics of first-order p.d.e.; classification of second-order equations into elliptic, parabolic, and hyperbolic types; special consideration of Laplace's equation, heat equation, and wave equation; hyperbolic systems, etc.
Staff: F, W, Sp; Y.

645B Differential Equations (5)
Prereq: 645A. Continuation of 645A. See 645A for description.
Staff: F, W, Sp; Y.

645C Differential Equations (5)
Prereq: 645B. Continuation of 645A, B. See 645A for description.
Staff: F, W, Sp; Y.

647A Special Functions (5)
Prereq: 560C and 570, or 670A. Infinite products, Gamma, Beta, and Zeta functions, asymptotic series, cylindrical functions, spherical functions, orthogonal polynomials, Legendre, Hermite, and Laquerre polynomials.

647B Special Functions (5)
Prereq: 647A. Continuation of 647A. See 647A for description.

660A Real Analysis (5)
Prereq: 560C. Abstract measure and integration, Lebesgue measure on real line; Lp-spaces; Fubini and Radon-Nikodym theorems; differentiation theory.

660B Real Analysis (5)
Prereq: 660A. Continuation of 660A. See 660A for description.

660C Real Analysis (5)
Prereq: 660B. Continuation of 660A-B. See 660A for description.

670A Complex Analysis (5)
Prereq: 560C and perm. Analytic functions, multivalued analytic functions, power series, complex integration, Cauchy integral theorem, its extensions and consequences. Residue theorem, Taylor and Laurent expansions, max-modulus principle and its generalizations, elementary conformal mapping, conformal representations, Riemann surfaces, Weierstrass and Mittag-Leffler's factorization theorems, simple periodic functions, simple properties of elliptic functions, Dirichlet problem.

670B Complex Analysis (5)
Prereq: 670A. Continuation of 670A. See 670A for description.

670C Complex Analysis (5)
Prereq: 670B. Continuation of 670A-B. See 670A for description.

671A Potential Theory (5)
Prereq: 560C and 570, or 670A. Newtonian and logarithmic potentials, their continuity and discontinuity properties, Dirichlet problems, subharmonic functions, harmonic functions, etc.

671B Potential Theory (5)
Prereq: 671A. Continuation of 671A. See 671A for description.

680A Point Set Topology (5)
Prereq: 560C. General topological spaces, product and quotient spaces, convergence, separation, countability properties, compactness and paracompactness, connectivity, metric spaces, completion, metrization, completely regular spaces, uniform spaces.

680B Point Set Topology (5)
Prereq: 680A. Continuation of 680A. See 680A for description.

680C Point Set Topology (5)
Prereq: 680B. Continuation of 680A-B. See 680A for description.

690 Independent Study (1-15)
Prereq: perm of grad chair. Independent study of topics under guidance of faculty member. (May be repeated for credit.)

695 (MS) Thesis (arranged)
Prereq: perm of grad chair. (May be repeated for credit.)

699 Topics in Mathematics (1-15)
Prereq: perm of grad chair. (May be repeated for credit.)

710A Group Theory (5)
Prereq: 613C. Abelian groups, permutation groups, Sylow theorems, solvable groups, group extensions, free groups and free products, group representation and characters.

710B Group Theory (5)
Prereq: 710A. Continuation of 710A. See 710A for description.

711A Theory of Rings and Modules (5)
Prereq: 613C. Rings with minimum condition, Wedderburn theorems, Jacobson radical, Jacobson density theorem, commutativity conditions, algebras, Goldie theorems, modules, and chain conditions.

711B Theory of Rings and Modules (5)
Prereq: 711A. Continuation of 711A. See 711A for description.

730A Differential Geometry—Classical (5)
Prereq: 613C, 660C, 680C. Local geometry of curves, local geometry of surfaces, tensors, Riemannian geometry, differential geometry in the large, applications.

730B Differential Geometry—Classical (5)
Prereq: 730A. Continuation of 730A. See 730A for description.

731A Differential Geometry—Modern (5)
Prereq: 613C, 660C, 680C. Differentiable manifolds, calculus of variations, lie groups, differential geometry in Euclidean spaces, g-structures.

731B Differential Geometry—Modern (5)
Prereq: 731A. Continuation of 731A. See 731A for description.

740A Ordinary Differential Equations (5)
Prereq: 645B. Advanced topics in ODE's.

740B Ordinary Differential Equations (5)
Prereq: 740A or perm. Continuation of 740A. See 740A for description.

740C Ordinary Differential Equations (5)
Prereq: 740B or perm. Continuation of 740A-B. See 740A for description.

741A Partial Differential Equations (5)
Prereq: 645C. Advanced topics in PDE's.

741B Partial Differential Equations (5)
Prereq: 741A or perm. Continuation of 741A. See 741A for description.

741C Partial Differential Equations (4)
Prereq: 741B or perm. Continuation of 741A-B. See 741A for description.

760A Measure and Integration (5)
Prereq: 613C, 660C, 680C. Various types of measures and integrals in modern research.

760B Measure and Integration (5)
Prereq: 760A. Continuation of 760A. See 760A for description.

761A Functional Analysis (5)
Prereq: 660A or perm. Normed linear spaces, Hilbert spaces, Hahn-Banach extension theorems, Banach-Steinhaus theorem, closed graph theorem, applications to differential and integral equations.

761B Functional Analysis (5)
Prereq: 761A. Topics selected from spectral theory, Banach algebras, integration in Banach spaces, linear topological vector spaces, and other topics.

761C Functional Analysis (5)
Prereq: 761B. Continuation of 761B. See 761B for description.

780A General Topology (5)
Prereq: 680C. Continuation of main line of development of 680A-B-C, but at deeper and more advanced level. Offered especially for those students who intend to specialize in general topology.

780B General Topology (5)
Prereq: 780A. Continuation of 780A. See 780A for description.

780C General Topology (5)
Prereq: 780B. Continuation of 780A-B. See 780A for description.

809 Topics in the Foundation and History of Mathematics and in Number Theory (1-15)
Prereq: perm of grad chair. Selected topics not offered in normal course offerings. (May be repeated for credit.)

819 Topics in Algebra (1-15)
Prereq: perm of grad chair. Detailed study of advanced topics not covered in other algebra courses. (May be repeated for credit.)

829 Topics in the Teaching of Mathematics (1-15)
Prereq: perm of grad chair. Selected topics not covered in regular course offerings. (May be repeated for credit.)

839 Topics in Geometry (1-15)
Prereq: perm of grad chair. Selected topics not covered in regular offerings. (May be repeated for credit.)

849 Topics in Applied Mathematics (1-15)
Prereq: perm of grad chair. Selected topics not covered in regular offerings. (May be repeated for credit.)

859 Topics in Probability, Statistics, and Stochastic Processes (1-15)
Prereq: perm of grad chair. Selected topics not covered in regular offerings. (May be repeated for credit.)

869 Topics in Real Analysis (1-15)
Prereq: perm of grad chair. Selected topics not covered in regular offerings. (May be repeated for credit.)

879 Topics in Complex Analysis (1-15)
Prereq: perm of grad chair. Special topics not ordinarily covered in other courses. (May be repeated for credit.)

889 Topics in Topology (1-15)
Prereq: perm of grad chair. Special topics not covered in other courses. (May be repeated for credit.)

890 Independent Study (1-15)
Prereq: perm of grad chair. Independent study under guidance of faculty member. (May be repeated for credit.)

891 Seminar (1-15)
Prereq: perm of grad chair. (May be repeated for credit.)

895 Dissertation (arranged)
Prereq: perm of grad chair. (May be repeated for credit.)

■ MECHANICAL ENGINEERING

(See Engineering, Mechanical)

■ MODERN LANGUAGES

(See Foreign Languages and Literatures)

■ MOLECULAR AND CELLULAR BIOLOGY

The Molecular and Cellular Biology Program offers graduate study leading to the Ph.D. in a broad range of areas in molecular and cellular biology. The program provides and encourages an interdisciplinary approach to doctoral study.

Admission to the program requires simultaneous admission to a Ph.D. program in the Department of Biological Sciences, the Department of Chemistry, the Department of Environmental and Plant Biology, or the Department of Psychology. Applicants must have a B.A., B.S., or M.S. degree in biological or physical science. Criteria considered are coursework completed, grades, letters of recommendation, and scores on the Graduate Record Examination (GRE).

Unconditional admission requires an overall grade-point average of 3.0 on a 4-point scale. Financial aid is contingent upon unconditional admission. International students, for whom English is not their primary language, are required to have earned a minimum grade of 575 on the Test of English as a Foreign Language (TOEFL). Although applications are considered at any time, to maximize the possibility of financial aid, completed applications and supporting materials should be submitted prior to March 1.

Study and research are guided by a doctoral advisory committee, which is formed by the end of the third quarter of study in the program. A great deal of the responsibility for determining the student's program of study is left to the doctoral advisory committee. However, a required core curriculum consists of a year of biochemistry (CHEM 590, 591, 592); molecular biology (MCB 720); cell biology (PBIO 531); and molecular and cellular biology laboratory (MCB 730). Students are required to register for Seminar in Molecular and Cellular Biology (MCB 741) during three quarters each year and must present at least one seminar each year. Students must receive doctoral advisory committee approval of a written research proposal by the fifth quarter in the program, and written and oral qualifying examinations must be passed by the end of the second year of study. Each student receiving support from the Molecular and Cellular Biology Program is required to serve as a teaching associate for two quarters per academic year. Students must demonstrate proficiency in scholarly disciplines such as statistics, computer languages and/or uses, foreign languages, or advanced mathematics as decided by their doctoral advisory committee. Each student must defend her or his dissertation before the doctoral advisory committee at a public forum. In addition, each student is required to present the dissertation research as a program seminar.

720 Molecular Biology (4)
Prereq: CHEM 590, or perm. Introduces students to the basic concepts and techniques used in molecular biology. Topics include nucleic acid and chromatin structure, replication, recombination, the processes of transcription and translation and their regulation, plasmids, viruses, transposable elements, and techniques used in molecular biology.
James, Kopchick, Showalter; W.

730 Molecular and Cellular Biology Laboratory (4)
Prereq: 720 and PBIO 531, or perm. Exposes the MCB student to a wide variety of laboratory techniques used in the broad field of molecular and cellular biology by allowing the student to carry out these techniques in the laboratory.
Showalter; Sp.

741 Seminar in Molecular and Cellular Biology (1)
Prereq: perm. Involves student presentation and discussion of seminars on topics of current interest in the area of molecular and cellular biology.
Staff; F, W, Sp.

751 Topics in Molecular and Cellular Biology (2-6, max 12)
Prereq: perm. Designed for the presentation of significant current topics in molecular and cellular biology in response to specific student demand.
Staff; D.

760 Advanced Cell Biology (4)
Prereq: CHEM 592 and perm. A discussion of current research directions in cell biology. Topics include, but are not limited to, protein transport and targeting, chemical signaling between cells, membrane transport and excitability, as well as cellular differentiation. Emphasis on current research directions of these topics.
Staff; W-odd years.

■ MUSIC

- **History and Literature**
- **Independent Study**
- **Music Education**
- **Music Therapy**
- **Performance**
- **Theory or Composition**

ADMISSION

To begin a graduate program in music, a student is required to have completed, with at least a 2.5 accumulative average, an undergraduate curriculum in music from an accredited institution offering an undergraduate degree equivalent to the requirements of the National Association of Schools of Music. Music education students not holding standard certification must earn Ohio certification.

Personal auditions and interviews should be arranged by all candidates. (Taped auditions will be accepted only if a personal audition is difficult or impossible.) Candidates in composition must submit scores and a statement of purpose, and if possible, recorded tapes.

After admission has been granted, placement examinations are given to all entering graduate students during registration week of the first quarter of enrollment. An incoming student is required to take a proficiency test in theory and history and literature of music. The results of these placement tests are used in planning the student's course of study. Applied majors must demonstrate graduate level performance proficiency. Deficiencies in undergraduate preparation should be removed during the first year of graduate study.

Qualified applicants may apply for admission to the School of Music graduate programs for any quarter. All application materials must be submitted 30 days prior to the quarter in which the student plans to begin his or her graduate program. Typically, the school begins awarding financial aid on April 1 of each year for the next academic year; therefore, early application for financial aid is encouraged.

GENERAL REQUIREMENTS

Programs leading to the Master of Music degree, requiring a minimum of 45 quarter hours of graduate work, are offered in applied music (performance), theory or composition, music history and literature, and music therapy. A thesis or its equivalent is required in all programs except music education, where a 48-quarter-hour (minimum) nonthesis option is available. Each major in applied music performs a public recital, while majors in composition present compositions in a large form in lieu of a thesis.

In addition to the 45 quarter hours required for the M.M. degree, students in voice (performance) are required to demonstrate skill in German, French, and Italian diction. Students in music history are required to demonstrate reading ability in at least one foreign language. An oral examination is required of each candidate. See the School of Music *Graduate Handbook* for specific requirements.

MASTER OF MUSIC PROGRAMS

Music Education

The M.M. degree in music education provides an opportunity to pursue advanced practical and theoretical studies in the field of music education. Although the focus of the program is upon preparation to be a more skillful teacher, many options are possible, including preparation for music administration and supervision. The degree program prepares students for permanent certification and doctoral study leading to college teaching. The coursework is divided equally among music education and other areas such as music theory, music history, jazz studies, and applied music (including conducting). Some candidates elect related coursework in business, educational administration, theater, or comparative arts.

Music Therapy

The M.M. degree in music therapy provides an opportunity for graduate students to pursue advanced studies in research, teaching, clinical, and administrative skills. Music therapy is an interdisciplinary field that requires a strong background in music, music therapy practices, and the behavioral sciences. Coursework is designed to enhance the student's understanding in these areas of study, to promote advanced clinical and research skill, and to enable specialization in a cognate area of applied music or nonmusic study. The curriculum consists of a minimum of 46 quarter hours in music therapy core courses, music theory, history and/or composition, and music and nonmusic electives.

Students with a baccalaureate degree in music in an area other than music therapy may elect the combined equivalency master's program in music therapy and will concurrently complete deficiency courses toward the RMT (Registered Music Therapist) while electing some graduate-level courses toward the master's degree. A student lacking substantial undergraduate music requirements may be admitted as a special student to the equivalency-only program, a nondegree offering that enables the student to meet RMT registration requirements with the National Association for Music Therapy. Eligible equivalency students may elect a limited number of graduate courses during equivalency study, and with permission, complete the graduate degree following a six-month internship (or equivalent) in music therapy. Additional nonmusic certification may be achieved during the course of study. NAMT Board Certification is obtained following successful completion of the national certification examination.

Performance

The M.M. degree in performance is designed for professionally oriented performers, and studio and school music teachers who wish to pursue this curriculum as a terminal degree, or those who wish to use it as a foundation for doctoral study. The goal is to prepare graduate students, both technically and intellectually, for professional careers as performers or as artist-teachers. Acceptance into the Master of Music in performance is by audition only.

Within the area of performance, the student may elect a Master of Music degree in performance with emphasis in pedagogy. Areas of concentration in this degree program are strings, woodwinds, and piano. The goal of the program in strings and woodwinds is to prepare students for teaching in colleges, public schools, and private studios. A greater emphasis is given to pedagogy and pedagogical techniques, including teaching methods and materials, than in the traditional performance curriculum. In addition to the above program goals, students in piano receive group and private piano instruction.

An audition is required on the major instrument for admission to these programs. (It is advantageous to have previous experience on at least one other family instrument in woodwinds and strings.)

Theory, Composition, and Music History and Literature

The Master of Music degree is offered in music theory, composition, and music history and literature. Although each degree program requires a minimum of 45 quarter hours of graduate work, within each program of study there are a variety of course offerings available that enables the graduate student to design a program best suited to his or her individual professional needs.

Within the 45-quarter-hour graduation requirement, the M.M. in music theory and the M.M. in music history and literature require a written thesis. In addition, the student in music history is required to demonstrate reading ability in at least one foreign language. The M.M. in composition requires a large-scale composition in lieu of the thesis. All degree programs in the theory-composition-music history and literature area require an oral examination of the degree candidate. Students applying for entrance into the Master of Music program in music theory or music history should submit an original, scholarly paper on any topic within the discipline of the proposed major field of study.

• History and Literature

521 History of Musical Styles I (3)
Prereq: perm. History of music with survey of music literature to 1600.

522 History of Musical Styles II (3)
Prereq: perm. History of music with survey of music literature from 1600-1750.

523 History of Musical Styles III (3)
Prereq: perm. History of music with survey of music literature from 1750 to present.

524 Literature of——(3)
(a) vocal music; (b) piano music; (c) chamber music; (d) orchestral music; (e) organ music; (f) opera music; (i) orchestral instruments.
A.

527 Folk Music in the United States (3)
Introduction to selected types of folk music in U.S.
Scholten; Sp; Y.

528 Jazz History (3)
Various musics collectively known as jazz. Exploration of rhythmic, melodic, and harmonic features with emphasis upon Blues, Dixieland, Ragtime, Boogie Woogie, Swing, Bop, Cool Jazz, and Contemporary Jazz.
Wetzel; W; Y.

531 Ancient and Medieval Music (4)
Prereq: perm. Music as artistic and theoretical expression of antiquity and Middle Ages; history of musical styles to 1410.
A.

532 Music of the Renaissance (4)
Prereq: perm. Musical styles (ca. 1410-1600).
A.

533 Music of the Baroque Period (4)
Music of age of concertato and basso continuo (ca. 1600-1750).
A.

534 Music of the Classic Period (4)
Prereq: perm. Music styles of Rococo and Classicism through first qtr of 19th century.
A.

535 Music of the 19th Century (4)
Prereq: perm. Music as artistic expression of 19th century Romanticism.
A.

536 Contemporary Music (4)
Prereq: perm. Music as artistic expression of our time. Various styles since ca. 1900.
A.

537 Analysis of Music Notation (3)
Prereq: perm. Gregorian through Medieval modal notation.
F; D.

538 Analysis of Music Notation (3)
Prereq: 537. Franconian and Ars Nova notation systems.
W; D.

539 Analysis of Music Notation (3)
Prereq: 538. Continuation of 538.
Sp; D.

620 Seminar in Theory and Music History and Literature (3, max 9)
Individual studies of problems in music history and theory. Methods of music research and use of music bibliography.
Wetzel; F; Y.

• Independent Study

600 Independent Study (1-15)
Prereq: perm.
F, W, Sp, Su; Y.

695 Thesis (as recommended by dept) (1-6)
Y.

• Music Education

563 Instrumental Techniques and Materials (4)
Advanced techniques for high school and college instrumental groups. Literature and materials.
Damron; Sp; Y.

564 Marching Band Techniques (3)
Prereq: perm. Techniques for preparation of high school and college marching band performance.
Young; Sp; Y.

565 Choral Techniques and Materials (4)
Advanced techniques for high school and college vocal groups. Literature and materials.
Jarjisian; Sp; Y.

566 Contemporary Elementary Music Education (4)
Prereq: perm. Advanced course in techniques and materials for elementary music teaching such as Orff and Kodaly.
Scholten; F; Y.

568 General Music in Junior High (4)
Prereq: perm. Advanced course in techniques and materials for junior music teaching such as team teaching, learning stations, and humanities.
M. Butler; W; Y.

576 Workshops and Institutes (1-4)
Prereq: perm. (a) music clinic workshop, (b) elementary music workshop, (c) chamber music institute. May be repeated for credit, but credit may be applied to degree electives only once for each workshop.
Staff; D.

581 Psychological Foundations of Music (3)
Prereq: perm. Basic study of acoustics, ear, and hearing. Psychological, sociological, and physiological processes involved in musical behavior.
Codding; F; Y.

671 Advanced Topics in Music Education (4)
Prereq: perm. Various topics in music education (including various methods of measuring musical aptitude and achievement) and study of experimental research methodology.
Damron; W; Y.

672 Advanced Topics in Music Education (4)
Prereq: perm. History and philosophy of American music education.
Scholten; W; Y.

675 Introduction to Graduate Studies in Music Education (3)
Introduction to grad study and research methods in music education.
Scholten; F; Y.

677 Organization and Administration of School Music (3)
Prereq: perm. Administration and supervision of school music programs. Role of supervisor, consultant, director, or coordinator of music in public schools. Personnel, materials and equipment, finance, curriculum, in-service training, and community-school relationships.
Damron; Sp; Y.

• Music Therapy

580 Advanced Music Therapy Practicum (3)
Field experience with various clinical populations; supervision and leadership in field experience.
Staff; F, W, Sp; Y.

583 Research in Music Therapy and Psychology of Music (3)
Introduction to graduate study and research, extensive review of psychology of music and music therapy literature from a research perspective, experience with on-campus research, research analysis and design including writing a research paper suitable for presentation or publication.
Staff; F.

584 Clinical Practice in Music Therapy (3)
Review and analysis of music therapy techniques with various populations and assessment of their effectiveness; design and implementation of music therapy programs for various populations (alternatives and strategies); assessment with various populations; communication across various clinical disciplines in various settings.

585 Seminar in Music Therapy (3)
Current topics in music therapy, including national trends and problems in the field; administrative concerns in developing and enhancing music therapy programs; leadership in music therapy including skills and strategies for effecting change at various levels; legislative activity and organizational activity.
Staff; Sp.

694 Professional/Clinical Project (4)
Original, professional, or clinical demonstration project resulting in a written paper suitable for presentation or publication at a professional meeting or in a professional journal.
Staff; Sp.

695 Thesis (4)
Original experimental research investigation suitable for presentation at research session of professional conference and/or publication in a research-oriented journal.
Staff; Sp.

• Performance

540 Voice (1-6)
Prereq: perm.
Staff; F, W, Sp; Y.

541 Piano (1-6)
Prereq: perm.
Staff; F, W, Sp; Y.

542 Stringed Instruments (1-6)
Prereq: perm.
Staff; F, W, Sp; Y.

543 Woodwind Instruments (1-6)
Prereq: perm.
F, W, Sp; Y.

544 Brass Instruments (1-6)
Prereq: perm.
Staff; F, W, Sp; Y.

545 Percussion Instruments (1-6)
Prereq: perm.
Staff; F, W, Sp; Y.

546 Organ (1-6)
Prereq: perm.
F, W, Sp; Y.

547 Ensemble (1-2, max 6)
Prereq: perm.
F, W, Sp; Y.

550 Accompanying (1, max 3)
Basic problems in accompanying singers and instrumentalists—rehearsal techniques, ensemble, pedaling, balance, etc. May be repeated.
W, Sp; Y.

551A Marching Band (2)
Prereq: audition.
Staff; F; Y.

551B Wind Symphony (2)
Prereq: audition.
Staff; Y.

551C University Band (1)
Prereq: audition.
Staff; Y.

551D Varsity Band (1)
Prereq: perm.
Staff; Y.

552A Symphony Orchestra (2)
Prereq: audition.
Staff; Y.

552B Chamber Orchestra (1)
Prereq: audition.
Staff; Y.

553A University Singers (2)
Prereq: audition.
Staff; Y.

553B Choral Union (1)
Prereq: audition.
Staff; Y.

553C Opera Theater (1-4)
Prereq: audition.
Staff; Y.

553D Men's Glee Club (1)
Prereq: audition.
Staff; Y.

553E Women's Glee Club (1)
Prereq: audition.
Staff; Y.

554 Chamber Music (1)
Prereq: perm. (a) string; (b) woodwind; (c) brass; (d) percussion; (e) contemporary; (f) piano; (g) vocal.
Staff; Y.

555A Jazz Ensemble (1)
Prereq: audition.
Staff; Y.

555B Percussion Ensemble (1)
Prereq: audition.
Staff; Y.

555C Trombone Choir (1)
Prereq: perm.
Staff; Y.

557 Solo Repertoire (1)
Prereq: perm. Representative selections from standard and 20th century repertory: problems of technique, interpretation, style, accompaniment, and ensemble. (a) string instruments; (b) woodwind instruments; (c) brass instruments; (d) vocal; (e) piano; (f) percussion.
Staff.

558 Pedagogy (2)
Prereq: perm. Methods and materials of teaching fundamentals of instruments. Lec, class performance, teaching demonstration and library research. (a) string instruments; (b) woodwind instruments; (c) brass instruments; (d) vocal; (e) class piano; (f) percussion.
Staff.

558G,H,I Piano Pedagogy (2)
Practical course aimed at providing creative teaching strategies for piano teacher. Teaching philosophies, objectives, and procedures discussed and applied to group, class, and private piano instruction. Includes teaching techniques for working with students of all ages and levels. (May be repeated.)
F, W, Sp; Y.

559A Advanced Instrumental Conducting (3)
Prereq: perm. Advanced reading and conducting of large instrumental works.
F; Y.

559B Advanced Choral Conducting (3)
Prereq: perm. Advanced reading and conducting of large choral works. Standard and new works for public school and college groups.
Sp; Y.

570 Practicum in Music (1-2)
Prereq: perm.

572 Advanced Group Instruction in Functional Piano (2)
Prereq: piano classification 243. For pianists, emphasizing development of keyboard skills, harmonizing, transposing, sight-reading, etc., that students will encounter as piano teachers, music educators, or music therapists. (May be repeated.)
Sp; Y.

575B Italian Diction (1)
Prereq: perm.

575C German Diction (1)
Prereq: perm.

575D French Diction (1)
Prereq: perm.

697 Recital (1-2)
Prereq: perm. Full-length public recital. A recording of the degree recital will be filed in library.
Staff; F, W, Sp; Y.

• Theory or Composition

500 Introduction to Music Theory (3)
Prereq: nonmusic major. Introduction to music theory: pitch and rhythmic notation and chords.
Y.

501A Theory Survey (3)
Survey of some of the compositional techniques found in the 20th century: Post-Romantic and Impressionistic, Contemporary Period (1910-1945), Twelve-Tone, and music since 1945.
Y.

501B Theory Survey (3)
An analytical survey of homophonic and polyphonic musical forms.
Y.

502A Styles I (3)
Prereq: perm. Analysis of 15th-century music.
F; A.

502B Styles II (3)
Prereq: perm. Analysis of post-Romantic music.
W; A.

502C Styles III (3)
Prereq: perm. Analysis of 20th-century music.
Sp; A.

503A Theory Pedagogy I (3)
Prereq: perm. Designed to meet needs of students planning to teach theory at college level. Current materials and pedagogical approaches surveyed.

503B Theory Pedagogy II (3)
Prereq: 503A. Continuation of 505. See 505 for description.
D.

505A Jazz Theory I (3)
Prereq: perm, keyboard. Harmonic vocabulary, notational systems, chord progressions, structures, and techniques in traditional jazz.

505B Jazz Theory II (3)
Continuation of 505A.
D.

507A Counterpoint I (3)
Prereq: perm. 16th-century counterpoint, practices and styles, Lassus and Palestrina.
F; A.

507B Counterpoint II (3)
Prereq: perm. 18th-century counterpoint; invention, canon, fugue.
W; A.

510 Composition (3)
Prereq: perm. Extensive writing in larger vocal and instrumental forms.
Y.

510B Electronic Music Composition (3)
Prereq: 413 or 413A and perm. Instruction in the issues, aesthetics, and techniques of classical electronic music composition.
Staff; F.

511 Composition (3)
Prereq: 510. Continuation of 510.
Y.

512 Composition (3)
Prereq: 511. Continuation of 510-511.
Y.

513 Introduction: Electronic Music (2)
Introduction to electronic music covering basic concepts and providing a broad overview of current practices and trends on applying technology to musical ends.
Staff; F, Su.

514A Advanced Orchestration (2)
Prereq: perm. Problems in scoring original works for modern symphony orchestra. Satisfactory scores performed by Ohio University Symphony Orchestra.
D.

514B Advanced Orchestration (2)
Prereq: 514A. Continuation of 514A.
D.

514C Advanced Orchestration (2)
Prereq: 514B. Continuation of 514B.
D.

515 Microcomputer Applications in Music Production (3)
Prereq: perm. Basic concepts of digital FM synthesis and MIDI sequencing. Brief introduction to the use of microcomputers in music printing and other systems commonly used for electronic music production.
Phillips; W, Sp.

516 Project in Electronic Music (3)
Prereq: 515 and perm. Techniques of studio operation and main-

tenance, multitrack recording, tape editing, and mixing as they apply to electronic music.
Phillips; F, Su.

516A Advanced Projects in Electronic Music (3)
Prereq: 516, approved project proposal and perm. A project proposal must be submitted to and approved by the instructor prior to enrolling in this course. An electronic music composition will be produced for public performance.
Phillips; W.

516B Advanced Recording Studio Techniques (4)
Prereq: 516 and perm. Instruction in operating a 16-track recording studio. Topics include advanced miking techniques, sound processing, mixing, and SMPTE time code synchronization on a 16-track recorder.
Phillips; Sp.

517 Advanced Digital Synthesis (4)
Prereq: 515 and perm. Concepts of digital sound synthesis primarily using the Synclavier system. Topics include advanced FM synthesis, additive synthesis, sampling, sequencing, and SMPTE time code synchronization on the Synclavier.
Phillips; W.

517A Advanced Digital Synthesis and Multitrack Projects (4)
Prereq: 517, approved project and perm. A project proposal must be submitted and approved by the instructor prior to enrolling in this course. Supervision and guidance for working on creative electronic projects using the Synclavier and the 16-track recording studio.
Phillips; F, W, Sp.

616 Evolution of Harmonic Theory (3)
Prereq: perm. Writings of most important music theorists from 10th century to present.
F; A.

617 Evolution of Harmonic Theory (3)
Prereq: 616. Continuation of 616.
W; A.

618 Evolution of Harmonic Theory (3)
Prereq: 617. Continuation of 616-617.
Sp; A.

■ OHIO PROGRAM OF INTENSIVE ENGLISH (OPIE)

OPIE 565 is a service program for nonnative speakers whose proficiency in English is not adequate to permit them to enroll in an unrestricted program of academic courses. *Credit hours for the courses of this program are for visa validation and tuition on assessment only and are not applicable to degree requirements.* Enrollment in OPIE 565 for 15 hours is for full-time intensive study of English as a foreign language beginning at introductory, intermediate, or advanced level. Initial enrollment at the introductory level presumes continuation at the intermediate level for a total of 20 weeks of full-time intensive study. No credit courses may be taken concurrently with full-time intensive English. Enrollment in OPIE 565 for eight or twelve hours is for part-time semi-intensive supplemental study of English for students concurrently enrolled in a part-time program of degree credit courses.

Introductory/Intermediate Level Full-Time Intensive English. Five classroom practice and recitation hours daily, plus individually scheduled required language laboratory practice. Primary emphasis on developing mastery of spoken English. Registration for 15 quarter hours.

Advanced Level Full-Time Intensive English. Prerequisite: advanced proficiency level. Five classroom practice and recitation hours daily, plus individually scheduled required language laboratory practice. Emphasis on both spoken and written English usage. May follow introductory level. May be initial enrollment with required proficiency. Registration for 15 quarter hours.

Semi-Intensive Supplementary English. Prerequisite: advanced proficiency level. Two or three hours of classroom practice and recitation daily. Emphasis on both spoken and written English usage. Registration for eight or twelve quarter hours.

500 Special Studies (1-10)
Independent study for graduate students needing work in a specific area (e.g., pronunciation/speaking skills course for TAs). Credit earned applies toward registration, but not the student's degree.

565 English as a Foreign Language (8-15)
Full-time intensive or part-time semi-intensive English for nonnative speakers.
Staff; F, W, Sp, Su; Y.

■ PHILOSOPHY

Only students who have earned at least a 3.0 (B) average in their undergraduate courses in philosophy and a 2.5 average in all undergraduate courses will be admitted unconditionally into the graduate program. It is expected that an applicant will have taken at least 27 quarter hours in philosophy. Students who have not had a course each in value theory, symbolic (predicate) logic, ancient philosophy, and modern philosophy must take courses in these areas during the first two quarters in residence, or as soon as possible.

The Master of Arts degree in philosophy is granted upon the satisfaction of either of two sets of requirements:

(1) The thesis plan involves completion of 45 quarter hours in addition to any course taken to compensate for deficiencies in undergraduate preparation. These 45 hours must include one course from each of the following groups:

1. 518 Plato, 519 Aristotle;
2. 528 Continental Rationalism, 529 British Empiricism, 538 Kant;
3. 514 Analytic Philosophy, 544 Philosophy of Marxism, 548 Pragmatism, 558 Contemporary European Philosophy, 568 Phenomenology;
4. 530 Contemporary Ethical Theory, 531 History of Aesthetic Theory, 532 Problems in Aesthetics, 542 Philosophy of Law;
5. 516 Philosophy of Science, 517 Philosophy of Logic, 520-23 advanced logic courses, 550 Theory of Knowledge, 551 Metaphysics.

At least one other five-hour philosophy classroom course must be taken, and in addition, all graduate students in the program are required to take the Seminar (693) every fall and spring quarter they are in residence. Under the thesis plan the student will also submit an acceptable thesis on an approved topic and defend it in an oral thesis examination.

(2) The comprehensive examination plan requires the same number and distribution of courses as the thesis plan plus the passing of four comprehensive exams on a substantial list of readings selected by the student with the approval of a philosophy faculty advisor. Two faculty members will grade each examination.

502 Techniques of Formal Analysis (5)
Philosophical application of techniques of modern symbolic logic.
Staff; F, W, Sp; Y.

510 Emergence of a Science (4)
Prereq: 1 yr univ-level science. For both science and nonscience majors interested in historical and philosophical influences that led to present concept of chemistry as science. Chronological survey, largely nontechnical, of developments in chemistry from antiquity to present, combined with discussions of philosophers of science from Thales to Russell.
Pfeiffer, Zucker; Y.

513 Philosophy and Freudian Analysis (5)
Prereq: PSY 332 or 333. The philosophical and scientific presuppositions of Freudian psychology (including Freud's methodology) are identified and subjected to rigorous philosophical analysis. Freud's early thought on hysteria, dreams, sexuality, and psychoanalysis are emphasized. Recent attacks on the legitimacy of psychoanalysis are examined. Alternative schemes for understanding human behavior also discussed.
Zucker; D.

514 Analytic Philosophy (5)
Selected topics in contemporary Anglo-American philosophy.
Smith; D.

516 Philosophy of Science (5)
Analysis of selected problems in logic and methodology of sciences.
Zucker; Y.

517 Philosophy of Logic (5)
Prereq: 320 or 502. Problems surrounding attempt to bring order into our account of logic; nature of propositions; logical form; proper names; fictional entities; ontological commitment; modality, etc.
Staff; D.

518 Plato (5)
Hampton; A.

519 Aristotle (5)
Hampton; A.

520 Symbolic Logic II (5)
Prereq: perm. First order logic as a basis for theory construction and analysis.
Staff; D.

521 Proof Theory (5)
Prereq: 320 or equiv. Syntax and semantics of formal theories.
Staff: D.

522 Computation Theory (5)
Algorithms, recursive functions, Turing machines, decidability.
Staff: D.

523 Modal and Many-Valued Logics (5)
Prereq: 320 or 502. N-valued logics, modal logic.
Staff: D.

524 Foundation Theory (5)
Prereq: 320 or equiv. Axiomatic set theory as a basis for concept formation and theory construction.
Staff: D.

528 Continental Rationalism (5)
Descartes, Spinoza, Leibniz.
Petrik: A.

529 British Empiricism (5)
Locke, Berkeley, Hume.
Staff: A.

530 Contemporary Ethical Theory (5)
Current literature in selected topics in moral and social philosophy.
Trevas: A.

531 History of Aesthetic Theory (5)
Readings from Plato to Dewey and relation of these theories to selected arts and recent criticism.
Bender, Blocker: Y.

532 Problems in Aesthetics (5)
For students interested in the arts but not necessarily in issues primarily of interest to philosophers. Writing drawn from modern sources on theory of art, aesthetic criticism, creativity, truth in art, and aesthetic value.
Bender, Blocker: Y.

538 Kant (5)
Kant's *Critique of Pure Reason* with attention given to his ethical theory.
Petrik: A.

540 Contemporary Social Philosophy (5)
Consideration of any number of various issues in contemporary social, political, and legal philosophy. Possible topics: theories of distributive justice, culpability, causality and responsibility, legal and moral rights.
Smith: D

542 Philosophy of Law (5)
Consideration of nature and justification of law and examination of some specialized topics in philosophy of law including ascription of responsibility, civil disobedience, theories of punishment, liberty, etc.
Smith: Y.

543 Liability and Responsibility in the Law (5)
Prereq: PHIL 240, 330, 430, or 440. Study of some of major problematic areas in ascription of legal liability and responsibility. Chief areas of concern: (1) grounds on which courts determine who or what is causally responsible for what occurred; (2) extent to which finding of legal responsibility should take account of intentions, knowledge, recklessness, etc., of accused; and (3) whether only sane individuals should be held legally responsible.
Smith, Arnold: Y.

544 Philosophy of Marxism (5)
Philosophical inquiry into classical and contemporary Marxist thought stressing Marx, Engels, Lenin, Stalin, Mao, and several contemporary Marxists such as the "Praxis group" of Yugoslavia.
Borchert, Mickunas: A.

548 Pragmatism (5)
Peirce, James, Dewey, and other American thinkers.
Trevas: D.

550 Theory of Knowledge (5)
Critical examination of various views of what knowledge is and how it is attained.
Bender: Y.

551 Metaphysics (5)
Basic alternative conceptions of world, and such topics as substance, causality, self, freedom, space, and time.
Bender: Y.

552 Myth and Symbolism (5)
Review of theories concerning nature of mythology and symbolic process. Analysis of selected myths and symbols in various religions, literature, and art.
Collins, Weckman: Y.

553 Philosophy, Science, and World Views (5)
Transformation of ideas from one discipline to another, especially from philosophy to science and from science to generalized worldview. Emphasis on two case studies on moral and social views derived from Newtonian mechanism and Darwin's theory of evolution, with applications to recent religious and metaphysical implications drawn from new physics of Einstein and Heisenberg.
Blocker: D.

554 Semiotics in Communication (5)
Introduces students to the structures and processes of communication through the use of semiotics. Semiotics is concerned with systems of signs, their interrelationships, and the images used to transmit such systems. Since semiotics is being used widely in the analysis of literature, film, and other social means of communication, the course would acquaint the student with current modes of understanding the communicative process.
Mickunas: Y.

558 Contemporary European Philosophy (5)
Phenomenology and existentialism as seen in Husserl, Heidegger, Scheler, Hartman, Dilthey, Cassirer, Gebser, Ingarden, Sartre, Camus, Marcel, Merleau-Ponty, and Ricoeur.
Mickunas: Y.

560 Contemporary Religious Thought (5)
Problem of God; relation of faith and reason, human destiny, religious language—in thought of representative theologians and philosophers such as Tillich and Buber.
Staff: D.

568 Phenomenology (5)
Method and philosophy of phenomenological movement from Husserl to Merleau-Ponty.
Mickunas: Y.

570 Hinduism (5)
Vedic religion, Hinduism, Jainism.
Collins, Weckman: Y.

571 Buddhism (5)
Introduction to doctrines, origins, and varieties.
Collins, Weckman: Y.

572 Islam (5)
Introduction to core ideas.
Weckman: Y.

575 Chinese Philosophy (5)
Major Chinese philosophers and schools of thought from earliest times to present day.
Staff: D.

576 Indian Philosophy (5)
Classical Hinduism.
Staff: D.

577 Buddhist Philosophy (5)
Abhidharmika, Madhyamika, Yogacara, Zen, and other philosophical doctrines of Buddhism.
Staff: D.

578 African Philosophy (5)
Critical examination of question, debated today among African philosophers, whether traditional African thought systems should be regarded and developed as *philosophical* systems, and survey of most significant of these thought systems.
Blocker, Mosley: Y.

591 Seminar in Philosophy (1-15, max 15)
Prereq: perm. Selected problems.

660 Thinking About Death (4)
Prereq: perm. Survey and analysis of human thought and practices regarding death.
Weckman: Y.

690 Supervised Teaching (2)
Supervised experience, including observation, discussion, and counsel.
Staff: Y.

691 Seminar in Philosophy (1-15, max 15)
Selected problems.
Staff: D.

692 Special Studies (1-15, max 15)
Prereq: perm. Advanced study of philosopher, movement, or problem, to provide intensified training in area of concentration

related to but not necessarily that of student's thesis.
Staff; Y.

693 Seminar in Philosophy (1-15, max 15)
Prereq: perm.
Staff; F, Sp; Y.

695 Thesis (1-15, max 15)
Staff; Y.

■ PHOTOGRAPHY

(See Art, Photography)

■ PHYSICAL EDUCATION

(See Health and Sport Sciences)

■ PHYSICS AND ASTRONOMY

Graduate study and research leading to the Master of Arts, Master of Science, and the Doctor of Philosophy degrees are offered in physics. The principal research activities of the department extend over planetary physics, relativity and cosmology, nuclear physics, ultrasonics, low temperature, and condensed matter physics. Both experimental and theoretical studies are in progress in most of these areas; there is also theoretical work in many-body problems, and nonlinear problems in classical and quantum physics; some incidental studies are done on science history. Special programs of graduate work outside these areas, or fully interdisciplinary programs, can in appropriate cases be devised to suit particular interests.

Students entering these degree programs are normally expected to have concluded successful undergraduate work in mechanics, electricity and magnetism, thermodynamics, optics, atomic and nuclear physics, and quantum mechanics, and should also possess a working knowledge of mathematics comprising calculus, Fourier series, vector analysis, and the elements of partial differential equations. It is recommended that applicants take the Graduate Record Examination, including the advanced test for physics. Deficiencies of undergraduate preparation should not deter a prospective student with an otherwise good record, as these may be made up during the first year of graduate study.

The program of study is developed for each student in close consultation with faculty advisors. Emphasis is given both to individual needs and to general, broad requirements; early specialization is not encouraged. The following core courses are recommended to all students in their first two years of graduate study: 531, 601, 605-606, 607-609, 610-612, 613, 615-616, 623, and 735-736. Courses in related areas such as chemistry, engineering, mathematics, and computer science are often included in the program. Participation in the weekly colloquium, 891, is required of all graduate students. Professionally useful coursework may also be done further afield, as in business administration, economics, or interpersonal communication.

The M.S. degree can be earned by submission of a research thesis with an oral examination. It can also be obtained under a nonthesis option which nonetheless requires satisfactory completion of a work project (laboratory assignment, literature, search, essay, etc., at two to six credits), and must include the courses 605, 606, 607-609, 610-612, 615, and 623, or their equivalents. The M.A. in physics is an option reserved for particular cases which may also call for substantial work in other fields; candidates must follow an approved program filed with the Physics Graduate Committee and submit a scholarly paper based on these studies for approval by at least two readers. For every master's degree, 45 graduate credits in physics and approved electives are required.

No fixed number of credits is required for the Ph.D., but the student must first pass a comprehensive examination which consists of a written part and an oral part, usually taken toward the end of the second year of graduate study (the first year for a student entering with an M.S. degree from a recognized U.S. institution). Doctoral research is conducted under the supervision of an advisor and reviewed periodically by each student's dissertation committee. A final oral examination is held on the subject matter of the dissertation.

The department's policy is to encourage students to acquire and develop some knowledge of those foreign languages which are commonly used in the literature of physics and related sciences. Students will be guided by their advisors in the matter of which languages they could most usefully study.

There are no specific deadlines, but most applications for financial aid are received by March 1 and most offers are made by April 15. Most students enter the physics program in the fall; some also add the preceding summer session. Entry during the academic year is possible although not generally encouraged. For all details concerning graduate programs, write to the Physics Graduate Committee.

503 Digital Computing Methods in Physics (5)
Practical computer programming (FORTRAN, etc.) with special emphasis on problems in physics.

505 Mechanics (3-5)
Prereq: degree in area outside physics and perm. For students with grad rank, especially in multidisciplinary programs, whose preparation does not include equiv of 311.

506 Mechanics (3-5)
Prereq: degree in area outside physics and perm. For students with grad rank, especially in multidisciplinary programs, whose preparation does not include equiv of 312.

507 Electricity and Magnetism (3-5)
Prereq: degree in area outside physics and perm. For students with grad rank, especially in multidisciplinary programs, whose preparation does not include equiv of 427.

508 Electricity and Magnetism (3-5)
Prereq: degree in area outside physics and perm. For students with grad rank, especially in multidisciplinary programs, whose preparation does not include equiv of 428.

511 Thermodynamics (4)
1st and 2nd laws of thermodynamics, phase changes, and entropy. Temperature, thermodynamic variables, equations of state, heat engines. 3 lec, problems.

512 Kinetic Theory and Statistical Mechanics (4)
Kinetic theory, transport phenomena, and introduction to classical and quantum statistics. 3 lec, problems.

520 Acoustics (3)
Vibration, sound radiation, sound propagation, and practical aspects of sound (offered odd years only). 3 lec.

523 Optics (3-5)
Geometrical and physical optics. Reflection, refraction, lenses, polarization, birefringence, interference, diffraction, coherence, and selected introductory topics in modern optics. 3 lec, problems. 2 lab (optional).

529 Topics in Science for Elementary and Secondary Schools (1-5)
Prereq: perm. Selected topics related to the teaching of natural science in grades K-12. (May be repeated for credit. May not be used for credit toward a physics degree.)

531 Electronics Laboratory (3)
Experiments in electronic measurement techniques from simple a.c. and digital circuits to microprocessors and analyzers. 6 lab.

551 Quantum Physics (4)
Quantum effects in atomic and molecular physics, basic ideas of quantum mechanics, solutions to Schroedinger equation of simple systems. 3 lec, problems.

552 Quantum Physics (4)
Quantum effects in atomic physics, identical particles and Pauli principle, application of quantum mechanics to interpretation of atomic spectra and structure. 3 lec, problems.

553 Nuclear and Particle Physics (4)
Descriptive treatment of nuclear phenomena. Elementary theory of nucleon-nucleon interaction. Systematics of nuclear structure (shell model and collective model). Properties and interactions of fundamental particles. Devices and techniques of nuclear and high energy physics. 3 lec, problems.

571 Solid State Physics (4)
Fundamental properties of solid state of matter. 3 lec, problems.

575 Advanced Laboratory (1 hr per section, max 3)
Wide selection of experiments from many areas of physics. Limit of 2 students per section. Student may select up to 3 different sections each qtr.

601 Graduate Laboratory (1-4)
Selected experiments from all areas of physics requiring accurate measurements with refined apparatus.

602 Graduate Laboratory (1-4)
Continuation of 601. See 601 for description.

604 Experimental Techniques (1-5)
Prereq: perm. Laboratory in experimental safety and skills including machining, electronic projects, and experimental design.

605 Classical Mechanics (5)
Basic analytical techniques for point mass systems and rigid

bodies in traditional and contemporary perspective; mathematical complements. 3 lec, intensive problems.

606 Classical Mechanics (5)
Continuation of 605. See 605 for description. 3 lec, intensive problems.

607 Electrodynamics (5)
Deductive development from Maxwell's equations, including recent advances; special theory of relativity and applications to charged particle problems; mathematical complements. 3 lec, intensive problems.

608 Electrodynamics (5)
Continuation of 607. See 607 for description. 3 lec, intensive problems.

609 Electrodynamics (5)
Continuation of 607-608. See 607 for description. 3 lec, intensive problems.

610 Quantum Mechanics (5)
Brief review of Schroedinger equation; elements of scattering theory, phase shift analysis, and Born approximation; operators, matrices, angular momentum and spin; basic semi-classical, perturbation, and variational techniques, exchange and symmetry effects; atomic spectra and electromagnetic transitions; diverse applications; introduction to second quantization; mathematical complements. 3 lec, intensive problems.

611 Quantum Mechanics (5)
Continuation of 610. See 610 for description. 3 lec, intensive problems.

612 Quantum Mechanics (5)
Continuation of 610-611. See 610 for description. 3 lec, intensive problems.

613 Mathematical Physics Practicum (2)
Selected mathematical techniques important to physicists.

615 Mathematical Methods in Physics (5)
Contemporary and classical mathematics to complement basic graduate courses, particularly linear algebra, complex analysis, variational methods, generalized functions, differential and integral operators, and varied applications. 3 lec, intensive problems.

616 Mathematical Methods in Physics (5)
Continuation of 615. See 615 for description. 3 lec, intensive problems.

617 Methods of Theoretical Physics (3-5)
Selected advanced mathematical methods employed in theoretical physics. Group theory, linear operators, and partial differential equations treated at regular intervals.

619 Advanced Acoustics (2)
Interaction of ultrasonic waves with gaseous, liquid, and solid states of matter. 2 lec.

620 Advanced Acoustics (2)
Continuation of 619. See 619 for description. 2 lec.

623 Thermophysics (6)
Thermodynamical principles, potentials, and equilibrium criteria; ensembles, fluctuations, and partition functions; statistics of Bose-Einstein, Fermi-Dirac, and Boltzmann; applications to ideal systems. 4 lec, intensive problems.

650 General Relativity (5)
Prereq: 429 or perm. Introduction to general relativity. Einstein's field equations, gravitational waves, singular solutions, elements of relativistic cosmology. 4 lec.

695 Thesis (as recommended by dept)

696 Special Study (1-15)
Supervised individual study at beginning grad level. Can be used for writing M.S. or M.A. paper.

720 Theoretical Acoustics (2)
Acoustic fields, scattering of acoustic waves, and acoustic wave propagation. 2 lec.

726 Introduction to Nuclear Physics (4)
Experimental and basic theoretical aspects of interactions of particles in matter. Elements of nuclear structure and nuclear reactions. 3 lec, problems.

727 Introduction to Nuclear Physics (4)
Continuation of 726. See 726 for description. 3 lec, problems.

731 Introduction to the Solid State (4)
Structure and thermal, electronic, and magnetic properties of solids. 3 lec, problems.

732 Introduction to the Solid State (4)
Continuation of 731. See 731 for description. 3 lec, problems.

733 Introduction to the Solid State (4)
Continuation of 731-732. See 731 for description. 3 lec, problems.

735 Quantum Theory (4)
Advanced problems in nonrelativistic quantum mechanics. Relativistic quantum mechanics: Dirac and Klein Gordon equations. Second quantization: diagrammatic techniques, applications. 3 lec, problems.
Staff; F; Y; 1992.

736 Quantum Theory (4)
Continuation of 735. See 735 for description. 3 lec, problems.

737 Quantum Field Theory (3)
Basic quantum field theory; quantum electrodynamics, introduction to gauge fields. 3 lec.
Staff; Sp; Y; 1993.

741 Statistical Mechanics and Thermodynamics (2-4)
Selected topics.

742 Statistical Mechanics and Thermodynamics (2-4)
Continuation of 741. See 741 for description.

744 Solid-State Theory (3)
Applications of quantum theory to perfect crystals and to imperfections in solids. 3 lec.

750 Introduction to Particle Physics (3)
Basic properties of subnuclear particles; relativistic kinematics, techniques of high energy physics; symmetry principles. 3 lec.

751 Particle Theory (3)
Theoretical formulations and current questions regarding nature of, and interactions between, subnuclear particles. 3 lec.

752 Particle Theory (3)
Continuation of 751. See 751 for description. 3 lec.

855 Nuclear Theory (3)
Theory of nuclear reactions and nuclear models. 3 lec.

856 Nuclear Theory (3)
Continuation of 855. See 855 for description. 3 lec.

871 Advanced Quantum Theory (3)
Selected topics. 3 lec.

875 Advanced Nuclear Theory (3)
Selected topics of current interest. 3 lec.

877 Advanced Solid-State Theory (3)
Selected topics. 3 lec.

891 Colloquium (1)
Selected topics of current interest. Required of all grad students.

893 Seminar (1-4)
Thorough study of important area. Experimental techniques, classic experiments, and statistical methods discussed.

894 Special Topics (1-4)
Lectures on special topics such as optical physics, continuum mechanics, advanced quantum theory, or other subjects not specified under regular course headings.

895 Doctoral Research and Dissertation (as recommended by dept)

896 Special Study (1-15)
Supervised individual study in preparation for research.

897 Research Seminar (1-4)
Intensive study of selected subjects by special groups: (A) nuclear; (B) high energy; (C) acoustics; (D) solid state; (E) theoretical.

899 Problems in College Teaching (1-3)
For all grad students assigned to teaching duties.

■ POLITICAL SCIENCE

The Department of Political Science offers two graduate degrees: the Master of Arts in political science and the Master of Public Administration.

To begin graduate work on either of these degrees, a student should have the equivalent of 27 hours of undergraduate work in political science, but applications will also be considered from persons with academic backgrounds in closely related areas or with relevant practical experience. Applications for admission to either program may be submitted in any quarter. Submission of Graduate Record Examination scores is recommended for applicants for financial aid but is not required. A number of departmental associateships are available to qualified applicants. Holders of associateships normally are expected to assist in the instruction of introductory courses or in research. Tuition scholarships also are available. Applicants who seek financial aid for the following year should submit application materials by March 1.

The M.A. program covers five major areas of political science: American politics, comparative politics, international relations, political theory and methodology, and public administration. General requirements are a minimum of 50 quarter hours of graduate work, of which at least half must be in one of the areas of concentration listed above. The student may select either a thesis or nonthesis option for the degree, with an oral examination to be taken either on the thesis or on a reading list in the student's area of concentration. A certificate in public administration is available to those who concentrate in that field and take the required courses.

The M.A. is a specialized, professionally-oriented, interdisciplinary degree. This degree requires 70 hours of graduate work in public administration including an administrative internship or equivalent experience.

The department works closely with the University's Center for International Studies, Contemporary History Institute, Women's Studies Program, and the Institute for Local Government Administration and Rural Development.

501 American Constitutional Law (5)
Principles underlying American constitutional government. Consideration of leading cases with reference to interpretation of U.S. Constitution.
Gilliom.

502 American Constitutional Law (5)
Continuation of 501. See 501 for description.
Gusteson.

504 Civil Liberties (5)
Examination of selected civil liberties issues such as freedom of expression, freedom of religion, equality, rights of criminally accused, and rights of indigent.
Henderson.

505 American Political Parties (5)
Origin, growth, organization, and methods of parties. Suffrage, nominations, and elections. Role of parties in democracy.
Prisley.

506 Elections and Campaigns (5)
Examines nature of voter and rationality of voter decisions, impact of campaigns and their influence on election outcomes, techniques used in political campaigns, and role of elections in American society.
Cosgrove, Richard.

508 Urban Public Administration (5)
Examines administration of urban programs, encounters between urban administration and program clientele. Focuses on agency-client relationships, professionalism, and public service.
Burnier.

509 Criminal Procedure (5)
Role, function, and problems of American judicial, prosecutory, policing, and correctional systems in political process. Relationship of law and social organization.
Eslocker.

510 Public Policy Analysis (5)
Examines stages of policy process, including policy formulation, implementation, and evaluation. Also discusses development and methods of policy analysis.
Baum, Burnier, Mumper.

511 Public Administration (5)
Development of administrative organizations, current ideas in organizational theory, nature of federal bureaucracy, fiscal management, and control of administrative action.
Baum, Manring, Mumper.

512 Public Personnel Administration (5)
Analysis of philosophy, problems, and procedures of public personnel management. Recruitment, training and promotion policies, position classification, and employer-employee relations.
Baum.

513 Administrative Law (5)
Organization, function, and procedures of selected national regulatory agencies. Principles affecting administrative discretion, administrative power over private rights, enforcement, and judicial control of administrative decisions.
Staff.

514 Organizational Theory and Politics (5)
Examination of central role of organizations in public life, presenting major theories of organizations, organizational behavior, and the individual's role in organization.
Burnier, Manring, Mumper.

515 The American Presidency (5)
Analysis of office of national chief executive and its place in American political system: constitutional status and powers, functional development, and interrelationship of person and office.
Mumper.

517 Legislative Processes (5)
Examines the behavior of legislatures and legislators, the extent of their powers, and the tension between lawmaking and representation, concentrating primarily on the current era and the national level.
Cosgrove, Richard.

518 Interest Groups in American Politics (5)
Organization and tactics of pressure groups and their impact on the policymaking process.
Burnier.

519 Gay and Lesbian Politics (5)
Explores emergence and ramifications of gay political activism in Western culture. Changing religious, psychological, legal, and political perceptions of homosexuality examined in historical perspective.
Hunt.

520 Women, Law, and Politics (5)
Focuses on political and legal position of women in U.S. Covers women's legal status, feminist movement, current issues, and public policy responses concerning women's position such as Equal Rights Amendment, marriage and divorce laws, affirmative action, abortion, and pay equity.
Richard.

524 Intergovernmental Relations in the U.S. (5)
Examines intergovernmental fiscal patterns among federal, state, and local governments and impact of fiscal transfers on local budgeting and finance administration. Also includes analysis of nonfiscal patterns such as federal program requirements, their impact on local administrative processes, and other pressures on local budgeting and finance.
Burnier.

525 Environmental and Natural Resources Politics (5)
Examines history, influence, and tactics of the U.S. environmental movement and the nature of conflict in environmental policymaking at the local, state, and national levels. Emphasis on current environmental issues including air pollution, waste disposal, and use of public land.
Manring.

527 Formulation of American Foreign Policy (5)
Examines the domestic basis of United States foreign policy. Assesses how the foreign policy-making system operates within the Constitutional context. Considers the role of various governmental institutions, as well as the influence of public opinion, interest groups, and media in the foreign policy-making process.
Lambert.

529 Comparative Public Administration (5)
Examines and compares characteristics of comparative public administrative systems in various national settings.
Williams.

532 Policy Making in Russia (5)
Examines how Russian leadership deals with a number of major domestic problems.
Williams.

533 Russian Foreign Policy (5)
Analysis of foreign policies of Russia. Historical, ideological, strategic, and other influences.
Williams.

534 Government and Politics of Latin America (5)
Political systems of Latin America. Emphasis on power relationships and political obstacles to change in contemporary Latin America.
Walker.

535 Revolution in Latin America (5)
Revolution as theoretical concept and as practical reality in several Latin American countries. Special emphasis on Cuban and Nicaraguan revolutions.
Walker.

538 Government and Politics of Germany (5)
Analysis of political institutions, processes, and forces in contemporary Germany.
Bald.

539 Politics in France (5)
Major political processes, personalities, ideas, and institutions of modern France.
Barnes.

540 The Politics of Developing Areas (5)
Major theories and problems of political, sociocultural, and economic development in new nations of Asia, Africa, and Latin America, with special emphasis on heritage of colonialism, struggle for independence, and political adjustments to rapid social and technological change.
Gagliano, Hawes.

541 Government and Politics of Africa (5)
Development and structure of modern African states with emphasis on political processes in tropical Africa.
Barnes.

545 Government and Politics of Japan (5)
Political institutions and processes of Japan with emphasis on developments since 1945.
Suzuki.

546 Government and Politics of China (5)
Political institutions and processes and major political developments in China, with emphasis on recent events.
Staff.

547A Government and Politics of Southeast Asia (5)
Traditional governments in Southeast Asia, Western colonialism, rise of nationalism, achievement of independence.
Hawes.

547B Government and Politics of Southeast Asia (5)
Deals with political developments in states of Southeast Asia in post-WWII period. Sequel to 547A (547A is not a prerequisite, however).
Hawes.

552 Advanced International Relations (5)
In-depth analysis of various aspects of international relations including major theoretical approaches.
Kim.

555 International Law (5)
International law in interstate relations and in international organization.
Kim.

556 International Organization (5)
Nature, development, structure, and function of international organizations, with emphasis on United Nations.
Kim.

559 Arms Control and Disarmament (5)
Examines military force in nuclear age with special emphasis on strategy of nuclear deterrence, history of disarmament negotiations since WWII, arms control agreements, and case studies in current U.S.-Soviet arms control negotiations.
Bald.

563 The United States and Africa (5)
Origins and nature of American relations with African states, with emphasis on current American interests and policy.
Staff.

564 OAU and Africa (5)
An examination of the Organization of African Unity, its actions on various issues of interest to Africa, and the foreign policies of selected African states. The culmination of the course is participation in the annual model OAU meeting in Washington, D.C.
Baum.

571 Plato, Aristotle, and Premodern Political Thought (5)
Major figures and basic concepts characteristic of political thought in its ancient and medieval periods. Emphasis on original works of Plato, Aristotle, St. Augustine, St. Aquinas, and on developing one's own political values and theories.
Huntley.

572 Modern Political Thought (5)
Basic philosophic conceptions of modern nation state. Using original works, evolution of nation state traced through philosophical literature from its Renaissance origins. Attention on both formative and critical perspectives, such as Machiavelli, Rousseau, and Emma Goldman, with emphasis upon evaluation of norms associated with modern state.
Henderson, Hunt.

573 Contemporary Political Thought (5)
19th and 20th century political theory. Focus on such contemporary philosophical and political issues as emergence of European socialist tradition, origins of human aggression, and human alienation. Attention given to selected theorists such as Marx, Freud, Gandhi, and Sartre.
Henderson, Hunt.

575 Studies in Political Thought (5)
Selected topics in political theory: anarchism, socialism, democratic theory, technology and politics, etc. Consult department for information about current course description and schedule.
Staff.

576A American Political Thought (5)
Considers origin and development of political ideas from colonial period through slave controversy.
Prisley.

576B American Political Thought (5)
Continuation of 576A. Begins with Social Darwinism and concludes with contemporary political ideas in America. Can be taken independently of 576A.
Prisley.

577 Legal Theory and Social Problems (5)
Examination of legal reasoning and normative values of judges, lawyers, legal theorists, and administrative agencies in shaping legal solutions to contemporary social problems. Emphasis on developing one's own political and legal values.
Henderson.

578 Feminist Political Theories and Movements (5)
Explores issues of power, powerlessness, oppression, and transcending oppression in the context of feminism as a human rights movement. Topics include origins and history of sexism and feminism, classic treatises of feminist political theory, contemporary theories from conservative to anarchist, visions of post-sexist futures, "her-story" of feminist movements, movement strategies and tactics, practical applications.
Huntley.

579 Latin American Political Thought (5)
Evolution of Latin American political thought from conquest to present. Major emphasis on 20th century movements such as Democratic Left, progressive Catholic Left, and Marxist Revolutionary Left.
Walker.

581 Modern Political Analysis (5)
Problems of knowledge in social sciences, with emphasis on political science. Analysis of recent major theories or approaches in political science.
Dabelko.

582 Quantitative Political Analysis (5)
Prereq: perm. Relevance of scientific research techniques to study of politics.
Dabelko.

583 Statistical Package for Social Sciences (5)
Prereq: 582 or equiv. Use of microcomputers with SPSS/PC+ for statistical data analysis. Fundamental data analysis problems are examined in the context of computer applications to survey, aggregate, and experimental data. Students taking this course cannot receive credit for CS 522 or SOC 550.
Dabelko.

584 Management Skills for Public Administrators (5)
Practicum designed to introduce students to several management skills needed for success in public administration and to permit them to apply these skills in a classroom setting.
Baum.

586 Public Budgeting (5)
Examines politics, techniques, and consequences of public budgeting processes at federal, state, and local levels.
Weinberg.

587 Financial Management in Government (5)
Examines financial aspects of state and local governments. Concentrates on financial reporting, capital budgeting and debt, and investment strategies.
Weinberg.

590 Studies in Political Science (1-5)
Intensive study of special topics, including American government, international relations, political theory, and public administration.
Staff.

591 Research in Political Science (1-5, max 10)
Individual supervised research.
Staff.

592A Research in International Relations (1-5)
Prereq: perm. Individual supervised research or directed readings on selected aspects of international relations based on student's special interest.
Bald, Kim, Lambert, Molineu.

592B Research In American Politics (1-5)
Prereq: perm. Individual supervised research or directed readings on selected aspects of American government and politics based on student's special interest.
Dabelko, Gilliom, Prisley, Richard.

592C Research in Comparative Government (1-5)
Prereq: perm. Individual supervised research or directed readings on selected aspects of comparative government and politics based on student's special interest.
Barnes, Baum, Hawes, Suzuki, Walker, Williams.

592D Research in Public Administration (1-5)
Prereq: perm. Individual supervised research or directed readings on selected aspects of public administration based on student's special interest.
Baum, Burnier, Mumper, Weinberg.

592E Research in Political Theory (1-5)
Prereq: perm. Individual supervised research or directed readings on selected aspects of political theory based on student's special interest.
Henderson, Hunt, Huntley.

595 Internship Program (max 15)
Prereq: perm.
Staff.

610 Seminar in American National Government (5, max 15)
Selected topics.

611 Seminar in Comparative Politics (5, max 15)
Selected topics.

612 Seminar in International Relations and Organization (5, max 15)
Selected topics and theoretical issues.

613 Seminar in Political Theory (5, max 15)
Selected topics.

614 Seminar in Public Administration (5, max 15)

648 Politics of Southeast Asia (5)
Analysis of major themes such as boundary problems, corruption, military, regional cooperation.
van der Veur.

695 Thesis (1-10)
Prereq: perm.
Staff.

PSYCHOLOGY

Doctoral programs are offered in clinical, experimental, and industrial/organizational psychology. The clinical program is fully approved by the American Psychological Association. All doctoral programs offer the master's degree as a step toward the Ph.D. and require a research thesis for the master's degree. For the Ph.D., all students must satisfactorily complete a comprehensive examination, a scholarly tool, and a research dissertation. A one-year internship at an APA-approved facility is also required for the clinical Ph.D. All doctoral candidates are required to do teaching, professional, or clinical work under supervision, the specific amount to be determined by past experience and needs, but not less than the equivalent of three academic quarters of work.

For those interested in a master's degree but not in a Ph.D. degree, a specialized master's degree is offered in experimental psychology. It requires a minimum of 60 quarter hours and a research thesis. No terminal master's degree is offered in clinical or industrial psychology.

Applicants for graduate study are expected to have completed a minimum of 27 quarter hours of undergraduate psychology, including a course in statistics and one in experimental psychology. Applicants must submit scores on the Graduate Record Examination (including the general test and the subject test in psychology), transcripts of all academic work, three letters of recommendation from psychologists, and a statement of personal goals and interests. They also must have a minimum overall undergraduate average of 3.0 (A = 4.0). An applicant for the doctoral program who has a master's degree from another university must have a minimum graduate average of 3.4.

The Department of Psychology strongly encourages students to begin their graduate program in the fall quarter. Application materials must be received by February 1.

520 Elementary Statistics (5)
First statistics course for grad students who have not had such an undergraduate course. (Does not carry degree credit. Not open to students who have had PSY 121.)
Staff; F, W, Sp, Su; Y; 1992-93.

525 Elementary Experimental Psychology (5)
Prereq: perm. first course in designing experiments for grad students who did not have such an undergraduate course. (Does not carry degree credit. Not open to students who have had PSY 226.) 2 lec, 4 lab.
Staff; F, W, Sp, Su; Y; 1992-93.

541 Behavioral Measurement (4)
Prereq: 520 or EDRE 720 or equiv. Testing and measurement; basic criteria including objectivity, reliability, validity. Methods of test construction and validation for students who have not had such an undergraduate course. (Does not carry degree credit. Not open to those who have had PSY 241.)
Waters; W; Y; 1992-93.

559 Field Work in Psychology (1-15)
Prereq: perm. Applied supervised psychological practice in fieldwork agency approved by dept. (Does not count toward degree credit.) May be repeated. 1-15 lab.
Staff; F, W, Sp, Su; Y; 1992-93.

590 Readings in Psychology (1-5, max 20)
Prereq: perm. To broaden training of master's or doctoral level students in areas in which they need further work that cannot be obtained through specific courses yet.
Staff; F, W, Sp, Su; Y; 1992-93.

592 Preparing Psychology Papers (2)
Prereq: perm. Preparation of professional papers in psychology: application of technical style principles to experimental papers, psychological evaluations, and psychological reports; identifying writing problems. Tasks include writing and rewriting psychological information aimed at an informed reader and reviewing psychological writings that illustrate both correct and incorrect psychological style.
Lewis; F; D; 1992-93.

618 Systems of Psychology (5)
Prereq: perm. Philosophy of science in psychology: nature of observation, theory construction, and explanation, with historical review of important systematic positions in psychology.
Moates; Sp; A; 1991-92.

621 Intermediate Statistics for Behavioral Sciences (5)
Prereq: perm. Statistical inference and most commonly used tests of hypotheses involving normal curves, t test, chi-square, and F distributions; introduction to probabilistic classification and Bayesian statistics. 4 lec, 1 lab.
Waters; F; Y; 1992-93.

622 Intermediate Correlation and Regression (4)
Prereq: 621. Two-variable correlation and regression, partial and multiple correlation,and nonlinear relationships.
Carlson; W; Y; 1992-93.

623 Design and Analysis of Experiments (5)
Prereq: 622 or EDRE 721. Independent groups, repeated measures, and mixed analysis of variance designs. Matching statistical analyses to experimental procedures.
Bellezza; Sp; Y; 1992-93.

626 Advanced Experimental Psychology (3)
Prereq: 621. Experimental design and techniques. Individual experiments.
Waters; Sp; D; 1988-89.

633 Psychology of Personality (3)
Prereq: perm. Development and organization of personality: evaluation of major theoretical viewpoints; review of research on personality structure, dynamics, and change.
Gidycz; W; Y; 1992-93.

674 Psychological Aspects of Aging (4)
Prereq: perm. Current theory and research on the changes and consistencies in behavior related to aging, including learning, memory, personality, motivation, interpersonal perception, and adaptation to change; implications of research findings for the daily functioning of the older person.
Drevenstedt; W; D.

695 Thesis (1-10)
Prereq: perm.
Staff; F, W, Sp, Su; Y; 1992-93.

701 Experimental Sensory Psychology (5)
Prereq: 712 or perm. Analysis of classical sensory systems (vision, audition, olfaction, somatic, regulatory, etc.) and their contributions to various behaviors. 4 lec, 1 lab.
Staff; W; D; 1982-83.

703 Advanced Learning (5)
Prereq: perm. Lectures and readings covering theoretical works in field of learning.
Lewis; W; D; 1989-90.

704 Cognitive Processes (5)
Prereq: perm. Theory and research in human cognitive processes such as learning, memory, concept formation, problem solving, mental operations, consciousness, motor skills, and language within information-processing point of view.
Arkes, Schumacher; Sp; Y; 1992-93.

706 Psychology of Communication (4)
Prereq: perm. Application of communication theory, psycholinguistic principles and readability measurement to process of communication, with emphasis on written communication.
Staff; F; D; 1988-89.

707 Psycholinguistics (4)
Prereq: perm. How people produce, understand, and acquire language within framework of major psychological and linguistic theories of language. Emphasis on user of language rather than on language.
Moates; W; A; 1992-93.

708 Psychology of Judgment and Prediction (5)
Prereq: perm. Examines normative and descriptive models of human judgment, with emphasis on clinical judgment and prediction. Bias, diagnosis, selective information usage, and intuition also included.
Arkes; W; Y; 1992-93.

710 Motivation (5)
Prereq: perm. Dynamics of motivation including treatment of traditional theories, as well as achievement and cognitive motivational theories.
Arkes; F; D; 1988-89.

712 Physiological Psychology (5)
Prereq: perm. Biological basis of behaviors, with emphasis on central nervous system and neurological disorders.
Bellush; W; Y; 1992-93.

714 Comparative Psychology (5)
Prereq: perm. Behavior of lower and higher organisms leading up to humans.
Johnson; W; D; 1991-92.

715 Psychology of Human Differences (5)
Prereq: perm. Methodology, basic principles, and general findings in individual differences in intelligence, personality, interests, and perception; group differences by sex, age, race, and socio-economic class.
Staff; F; D.

727 Psychophysiology (4)
Prereq: perm. Human psychophysiology.
Kotses; F; Y; 1992-93.

728 Applied Psychophysiology (4)
Prereq: 727 or perm. Theory and research on the application of psychophysiological procedures to assessment and intervention in behavior therapy and behavioral medicine.
France; W; Y; 1992-93.

735 Experimental Social Psychology (5)
Prereq: perm. Major theoretical and research trends, with emphasis on attitudes, social perception, and small-group behavior.
Lassiter; W; Y; 1992-93.

736 Advanced Social Psychology (5)
Prereq: perm. Major research and theoretical trends in social psychology; observational learning and social motivation.
Alicke; Sp; D.

737A Psychopathology, Clinical (3)
Prereq: perm. Theoretical and empirical literature on definitions and systems of classifying deviant behavior patterns. Coverage of situational reactions, neuroses, character disorders, psychoses, organic brain damage, and mental retardation.
Garske; F; Y; 1992-93.

737C Psychopathology of Childhood (3)
Prereq: perm. Definitions and models of deviant childhood behavior. Comparison of child and adult patterns of clinical psychopathology. Attention to physical, learned, and social bases of deviant behavior.
Appel, Gidycz; Sp; Y; 1992-93.

740 Practicum in Clinical Skills (4)
Prereq: perm. Provides the introductory student with supervised practice in clinical skills relevant to the mental status examination, intake interviewing, and psychotherapy. Students also have an opportunity to observe the instructor interviewing psychiatric patients.
Lynn; W; Y; 1992-93.

741 Individual Intelligence Testing (4)
Prereq: 737A or concurrent and perm. Overview of theories of intelligence and issues in the assessment of intellectual functioning. Practice in administering, scoring, and interpreting the WAIS-R, WISC-R, Stanford-Binet, and other selected individual tests of intelligence for both adult and child clientele.
Drevenstedt; F; Y; 1992-93.

742 Objective Personality Assessment (4)
Prereq: 633 or concurrent and 737A and perm. Overview of objective personality assessment. Focuses on the administration and interpretation of widely used clinical assessment tools including the MMPI, the CPI, and behavioral assessment techniques.
Lynn; W; Y; 1992-93.

743 Projective Personality Assessment (1-5)
Prereq: 633 and 737A and 740 and perm. Provides an overview of projective personality assessment. Focuses on the administration and interpretation of widely used clinical assessment tools including the Rorschach Test, the Thematic Apperception Test, and incomplete sentence blank tests.
Lynn, Ogles; S; Y; 1992-93.

744 Behavioral Assessment (1-5)
Prereq: 737A and perm. Acquaints students with the theory and practice associated with behavioral assessment. The use of direct observation methods and self-report scaling highlighted. Integrates behavioral assessment methods with clinical practice.
McNamara; W; D.

745 Clinical Assessment of Children and Adolescents (4)
Prereq: 737C and 741 and perm. Administering, scoring, and interpreting major intellectual and personality tests used with children and adolescents; diagnostic interviewing techniques with children; assessment of special problems; report writing skills.
Gidycz; Sp; Y; 1991-92.

747 Assessment Practicum (1-5)
Prereq: perm. Supervised clinical experience in selected aspects of psychological assessment such as intelligence testing and personality assessment.
Staff; F, W, Sp, Su; Y; 1988-89.

748 A,B,C,D Neuropsychology (1-5)
Prereq: 737A and perm. Didactic training in structure of central nervous system, types of organic disorders, and diagnosis of neurological disorders. Topics include neuroanatomy and functional approaches to spinal cord, brain stem, cerebral hemispheres, cortex, subcortex, limbic system, and cerebellar hemispheres. Brain-behavior and endocrine relationships are also reviewed. Clinical case material is presented.
Sarver; F, W, Sp; Y; 1992-93.

759 Fieldwork in Psychology (1-15)
Prereq: perm. Applied supervised psychological practice in fieldwork approved by dept. May be repeated. 1-15 lab.
Staff; F, W, Sp, Su; Y; 1992-93.

761 Survey of Industrial and Organizational Psychology (5)
Prereq: perm. Application of psychological theories and research to topics in organizational behavior and personnel psychology.
Popovich; F; Y; 1992-93.

762A-B Organizational Psychology (4)
Prereq: 761. Study of behavior in organizations. (A) Organizational Behavior: major topics include motivation, social influence and groups, and leadership. (B) Organizational Theory: classical and contemporary perspectives on the process and structure of organizations.
Popovich; W; Y; 1992-93.

764A-B Personnel Psychology (4)
Prereq: 622 and 761. Topics in personnel psychology: (A) Criterion Development and Performance Evaluation: theoretical and prac-

tical aspects of criterion development and performance evaluation; (B) Selection and Placement: psychological, measurement, and legal perspectives on selection and placement.
Waters; Sp; Y; 1992-93.

765 Practicum in Industrial and Organizational Psychology (1-5, max 15)
Prereq: 761, 762A or B, 764A or B, and perm. Supervised field experience in organizational settings.
Popovich, Waters; F, W, Sp, Su; Y;1992-93.

773 Developmental Psychology (5)
Prereq: perm. Principles and research covering development of human abilities and behavior with emphasis on lifespan approach. Topics include developmental research methodology; variables influencing development; basic processes in development; and physical, motor, perceptual, cognitive, linguistic, motivational, emotional, social, and personality development.
Schumacher; F; Y; 1992-93.

775 Psychology of Exceptional Individuals (5)
Prereq: perm. Characteristics and problems of exceptional individuals; mentally retarded, mentally superior, sensory handicapped, emotionally disturbed, and culturally disadvantaged.
Staff; W; D; 1988-89.

780 Health Psychology (4)
Prereq: perm. Overview of theory and research in health psychology; psychological factors in such disorders as hypertension, coronary artery disease, headache, chronic pain, asthma, and immune disorders; applications and effectiveness of psychological interventions.
Holroyd, France; F; Y; 1992-93.

781 Pediatric Psychology (4)
Prereq: perm. Theory and research on the relationship between the psychological and physical well being of children, behavioral and emotional concomitants of disease and illness as they affect children and their families, applications and effectiveness of psychological interventions.
Creer; W; D; 1992-93.

788 Issues in Professional Psychology (3)
Prereq: perm, grad in psychology. Examines educational, ethical, and professional issues associated with the field of clinical psychology.
McNamara; W; Y; 1992-93.

790 Readings in Psychology (1-5, max 20)
Prereq: perm. To broaden training of master's or doctoral level students in areas in which they need further work which cannot be obtained through specific courses at present.
Staff; F, W, Sp, Su; Y; 1992-93.

791 Research (1-5)
Prereq: perm. (May be repeated.)
Staff; F, W, Sp, Su; Y; 1992-93.

793 Seminar in Teaching of Psychology (2)
Prereq: perm.
Carlson; Sp; Y; 1992-93.

825 Causal Modeling (4)
Prereq: 623. Linear models, path analysis, and causal modeling with emphasis on using the LISREL computer program.
Bellezza; Su; D; 1992-93.

826 Advanced Testing Principles (4)
Prereq: 623. Test theory and statistical considerations in construction, use, and interpretation of psychological measures.
Drevenstedt; D; 1991-92.

827 Multivariate Statistics I (5)
Prereq: 623. Introduction to multivariate statistics. Topics covered are matrix algebra, multiple regression, canonical correlation, discriminant analysis and classification, and factor analysis. Variety of commercial computer programs used.
Bellezza; F; Y; 1992-93.

828 Multivariate Statistics II (4)
Prereq: 827. Advanced topics in multivariate statistics, including multivariate analysis of variance (MANOVA), confirmatory factor analysis and causal analysis (LISREL), and log-linear models. Variety of commercially available computer programs used.
Carlson; W; Y; 1992-93.

833 Advanced Theories of Personality (5)
Prereq: 633. In-depth analysis of selected modern theories and related research, taken from ego psychology, cognitive-perceptual, dimensional, developmental, or social viewpoints.
Garske, Russell; D.

850A,B,P Individual Psychotherapy (1-5)
Prereq: 737A and perm. Survey of theory, research, and practice of individual approaches to psychotherapy and behavior change with adults. Practicum involves supervised psychotherapy work with a client.
Garske; F, W, Sp; Y; 1992-93.

851A,B,P Behavior Therapy (1-5)
Prereq: 737A and perm. The course is an integrated treatment sequence in behavior therapy. The initial course acquaints the student with the theoretical, empirical, and clinical basis for practice. Practicum gives supervised experience applying behavioral principles to clinical problems.
McNamara; F, W, Sp; D; 1991-92.

852A,P Cognitive Therapy (1-5)
Prereq: 737A and perm. Didactic instruction and supervised clinical experience in cognitive-behavior therapy. Readings in clinical literature, instruction, and supervised clinical cases emphasizing the techniques and methods of cognitive-behavior therapy.
Holroyd; F, W; D.

854A,B,P Community Psychology (1-5)
Prereq: 737A and perm. Survey of interventions and research in community psychology, including such topics as consultation, mental health education, prevention of mental disorders, program evaluation, and services for underserved clinical populations. Practicum involves supervision of pertinent clinical experiences.
Staff; F, W, Sp; D.

855A,B,P Counseling Psychology (1-5)
Prereq: 737A or 737C or concurrent and perm. Survey of theory, research, and practice on topics in counseling psychology. The practicum includes supervised work with counseling clients.
Staff; F, W, Sp; D; 1987-88.

856A,B,P Group Therapy (4)
Prereq: 737A and perm. Didactic instruction and supervised clinical experience in the techniques and methods of group psychotherapy. Typically one quarter of didactic instruction and readings in the clinical literature and two quarters of supervised experience as a group therapist.
Holroyd; F, W, Sp; Y; 1992-93.

857A,B,P Child Therapy (1-5)
Prereq: 737C and perm. Didactic and practicum training in intervention into child and adolescent psychological disorders.
Gidycz, McNamara; F, W, Sp; Y; 1990-91.

858A,B,P Family Therapy (1-5)
Prereq: 737A, 737C, or concurrent, and perm. Survey of behaviorally-oriented family therapy approaches followed by an in-depth presentation of functional family therapy, a behavioral systems approach. Role playing, discussion, and supervised interventions with families are methods used to teach this model. Low-income, multiproblem families are typical clients in this sequence.
Gordon; F, W, Sp; Y; 1992-93.

859A,P Interventions with the Aging (1-5)
Prereq: 737A and perm. Review of psychological approaches to the understanding, assessment, and treatment of problems of the elderly. Practical, supervised experiences with an aging population are included.
Drevenstedt; F, W; D; 1990-91.

860A,B,P Interventions in Health Psychology (1-5)
Prereq: 780 and perm. Application of psychological assessment and interventions to health psychology problems including chronic pain, headache, adaptation to chronic disease, psychological problems complicating medical treatment and compliance, stress-related disorders.
Holroyd; F, W, Sp; Y; 1990-91.

891 Research in Psychology (1-6)
Prereq: perm.
Staff; F, W, Sp, Su; Y; 1992-93.

894A-Z Advanced Seminar in Psychology (1-5, max 18)
Prereq: perm.
Staff; F, W, Sp, Su; Y; 1992-93.

895 Dissertation (1-15)
Prereq: perm.
Staff; F, W, Sp, Su; Y; 1992-93.

PUBLIC ADMINISTRATION

(See Political Science)

RADIO-TELEVISION

(See Telecommunications)

RUSSIAN

(See Foreign Languages and Literatures)

SOCIAL SCIENCES

The Master of Social Sciences degree is designed for graduate students who need to study two or more subjects within the social sciences field to earn the master's degree. Though we anticipate that most students will be public school teachers, candidates in other occupations may apply to the program. The degree is intended for students concluding their graduate education at the master's level.

The program is directed by a coordinator appointed by the dean of the College of Arts and Sciences. The coordinator will supervise the policies that guide the program and will coordinate such matters as admission, assignment of advisors with the social science departments, and the selection of a committee to administer the terminal oral examination.

DEGREE REQUIREMENTS

A candidate for the Master of Social Sciences degree must complete a minimum of 45 quarter hours in a minimum of 10 graduate courses in two or more of the social science disciplines.

Major and minor fields and auxiliary areas are chosen from the following social sciences: history, political science, economics, sociology-anthropology, and geography. Other subject fields such as psychology and social work that relate to a candidate's academic interest may be approved as minor or auxiliary fields.

Courses and credit will be distributed as follows:

1. A major of from five to seven courses comprising a minimum of 20 graduate credit hours.
2. A single minor; or a minor and an auxiliary area; or two auxiliary areas. A minor consists of three to five courses for a minimum of 12 graduate credit hours. An auxiliary field consists of two courses for a minimum of eight graduate credit hours.
3. Optional electives. One or two courses, for a maximum of 10 graduate credit hours, can be taken in other social science, science, or humanities areas if, in the judgment of the coordinator, they relate to the student's academic program.

Graduate Survey Requirement. Each candidate will complete in his or her discipline one graduate survey course designed to present a comprehensive survey of recent scholarship in that field.

Master's Essay Option. Each student can elect to write a master's research essay on a topic approved and directed by a graduate faculty member of the student's major field. The essay, taken for four or five hours of master's thesis credit, will count as one course in the major and as one of the ten required courses.

Terminal Examination. Upon completion of studies, each student must pass an oral examination designed and conducted by the student's examining committee. In composing this examination, the committee will be guided by the program of courses and research pursued by each candidate so that the examination will be reasonable in scope.

ADMISSION REQUIREMENTS

An applicant for admission to this program must have a bachelor's degree and at least one year of employment experience that is relevant to one or more social science disciplines. Applicants should have an undergraduate grade-point average of 2.75 for unconditional admission. Applicants with an undergraduate g.p.a. below 2.75 are encouraged to apply, but they may be admitted conditionally or they may be denied admission.

Students with between 24 and 30 undergraduate credit quarter hours in an intended major may be required to undertake a minimum of seven courses and 28 quarter hours of graduate credit in their major.

Students with fewer than 24 quarter hours of undergraduate credit in an intended major will be required to register as a special student and take those undergraduate courses required by the major department to qualify for graduate study in this program.

No more than 12 quarter hours in a maximum of three graduate courses passed with a grade of B or better will be accepted for this program from other colleges or universities. Credit earned in other Ohio University programs which, in the judgment of the coordinator, is appropriate for this program may be applied toward completion of the degree.

SOCIAL WORK

The Department of Social Work does not offer an advanced degree program. However, the department offers some graduate courses for students interested in pursuing graduate studies in social work. The courses have been developed in cooperation with the College of Social Work, Ohio State University. Thus, credit from these courses may transfer to this college for students who are admitted to its graduate program. Alternatively, the courses also may be used to count toward clock hours needed for social work relicensing in Ohio. For admission to any one of the courses, students must be admitted to a graduate program. Students not in a graduate program may seek admission to the sociology graduate program with nondegree status.

520 Social Welfare Policies and Programs I (3)
Provides historical and comparative analysis of social welfare systems. Examines the social welfare system's relationship to change in the basic social institutions: family, church, polity, and economic.
Staff: F.

521 Social Welfare Policies and Programs II (3)
Prereq: 520 or perm. Describes and applies a conceptual model for social welfare policy and program analysis. Emphasizes current issues in a range of social service delivery systems.
Staff: W.

533 Human Behavior and the Social Environment I (3)
Covers the theories, concepts, and research related to individuals and families as they develop over the lifespan and their application to social work practice. The systems model provides a unifying framework.
Staff: Sp.

SOCIOLOGY

The M.A. program in sociology offers preparation for advanced graduate training, teaching, and employment in various government and private agencies.

The department has a policy document, available upon request, that describes the organization of the M.A. program. Briefly, each student, in consultation with a faculty committee, designs his or her program which involves selecting courses and choosing between thesis and nonthesis options. A minimum of 50 hours of graduate coursework is required for the degree plus examinations, a major paper, or a thesis. While the bulk of the coursework must be done in sociology, students also may take a limited number of courses in related fields, such as public administration, computer science, philosophy, and history. The program is flexible and is designed to provide students with a fundamental grounding in theory and methods while at the same time allowing them to pursue specialized interests. The department has particular strengths in criminology, the study of deviance, gender studies, and social psychology. Upon request, a listing of faculty and their interests will be provided by the department. Students who enter the program should allow for four to six quarters of study.

Although the department does not adhere rigidly to undergraduate prerequisites, prospective students should have completed a minimum of 20 hours in sociology including a course in statistics. Students who apply to the program should have an overall average of 3.0 (A = 4.0), and should have at least a 3.0 average in undergraduate courses in sociology. Applicants must submit an application of admission and transcripts of all academic work to the Office of Graduate Student Services, and letters of reference to the Department of Sociology from three persons qualified to evaluate the applicant's capacity for graduate study in sociology. In addition, international students whose native language is not English must submit the Test of English as a Foreign Language (TOEFL) scores.

Applications for admission will be accepted until one month prior to the beginning of a quarter (three months in the case of applications from abroad). Applications for financial awards must ordinarily be completed by March 15.

A limited number of graduate associateships and tuition scholarships are available, and information may be obtained about them by writing to the chair of the Sociology Graduate Committee.

503 Development of Sociological Thought (5)
Prereq: perm. Major sociological concerns and concepts in their social-historical setting. Emphasis on 18th and 19th centuries.

504 Modern Sociological Theory (5)
Prereq: perm. Major sociological conceptual frameworks in 20th century.

505 Readings in Sociology (1-5, max 15)
Prereq: perm of instructor. Independent directed readings designed to expand student's understanding in selected areas of interest not covered in regular course offerings. Not for preparation for comprehensive exams, final paper(s), or thesis.

508 Latin American Society (5)
Prereq: perm. Intensive study of Latin American society from a sociological perspective. Emphasis on contemporary Latin American values, population problems, human-land relations, levels and standard of living, social institutions, urbanization, and social change.

512 Public Opinion Processes (5)
Prereq: perm. Attitudes and opinions in relation to formation of public opinion; political socialization and participation; social status, reference groups, decision making; role of mass media.

513 Mass Communication (5)
Prereq: perm. Personal and social functions of content in newspapers, radio, television, and films. Types of audiences and communication effects. Organization and control of mass media and problems in evaluation.

514 Contemporary Social Movements (5)
Prereq: perm. Organized movements resulting in major social changes; revolutionary, nationalistic, reform, religious. Agitation, leadership, ideology. Case studies of typical movements.

516 Society and the Individual (5)
Prereq: perm. Exploration of compatibilities and contradictions in psychological systems, culture, and social structure.

518 Third-World Development (5)
Prereq: 2 courses in social sciences. Focusing on various, often contrasting, approaches to national development, discusses ways in which basic needs such as agriculture/rural development, education, housing, health, and urbanization are met, and discusses these approaches within context of ethical values. Countries discussed may include China, Brazil, Cuba, Nicaragua, Tanzania, South Korea, Taiwan, and Bangladesh.

519 Small Groups (5)
Prereq: perm. Small group as unit of social systems; communication patterns, role definition, leadership, cohesion, etc.; review of current literature.

522 The American Family System (5)
Prereq: perm. Evolution of American family from colonial to present time. Analysis of structural and functional trends in light of theory and research.

524 Urban Sociology (5)
Prereq: perm. Historical development and recent emergence of city as dominant feature of modern social life. Demographic and ecological patterns and social organization of urban region.

525 Sociology of Food Production (5)
Prereq: perm. Examination of structural characteristics of agricultural sector of American society. Historical developments and current trends in demography as they relate to industrialization of agriculture, and examination of responses to these trends.

526 Industrial Sociology (5)
Prereq: perm. Various techniques used by management in U.S. to control employees, employee resistance and alienation, and proposals for changing present work arrangements. Also examination of work relations and organization in Scandinavia, W. Germany, Yugoslavia, and Japan.

528 Sociology of Religion (5)
Prereq: perm. Interrelationship between religious institutions and social structure from comparative perspective but with particular reference to American society.

530 Sociology of Organization (5)
Prereq: perm. Concentrates on structure and process of formal organizations. Modern society dominated by giant bureaucracies studied in detail. Various sociological perspectives for viewing organizations considered and evaluated. Impact of organizations on individuals discussed and problems of living in society dominated by organizations treated in depth.

531 Social Stratification (5)
Prereq: perm. Social and economic classes, castes, and other social strata; their origin, changes, and correlates in other spheres of society.

532 Political Sociology (5)
Prereq: perm. Analysis of social, economic, and political sources of corporate domination of state, opposition to such domination, and strategies for reducing it.

533 Sociology of Occupations and Professions (5)
Prereq: perm. Professionalism as characteristic of modern economic and industrial complexes; popular conception and modern theory; social and technological preconditions; occupation-profession continuum; components, barriers, and strategy; mock-professionalism; motivation and satisfaction; controls; professionalism in particular professions.

534 Sociology of Aging (5)
General introduction to social gerontology with emphasis upon normal aspects of aging. Major emphasis upon sociological dimensions of aging in context of such areas as socio-demographics of aging populations, values, roles, norms, self-concept, age stratification, aging patterns of minority groups, and application of current sociological theories of aging. Includes brief examination of social policy from sociological point of view.

535 Sociology of the Welfare State (5)
Prereq: perm. How proponents of sociological perspectives deal with the emergence, organization, growth, and contemporary issues of the U.S. social welfare systems. Some attention will also be paid to the social welfare systems of Sweden and other European countries.

550 Social Statistics (5)
Prereq: perm. Principles and procedures in treatment and presentation of quantitative social data.

553 Research Problems in Sociology (1-5, max 15)
Prereq: perm of instructor. Individual research in specific problem areas in which student has demonstrated ability and interest. Not for preparation for comprehensive exams, final paper(s), or thesis.

564 Social Control (5)
Prereq: 530 or 531. Nature of institutional control and sociocultural constraint as they affect human behavior. Theories and research.

565 Social Change (5)
Prereq: 12 hrs or perm. Dynamics and processes by which social change takes place, major theories of change, industrialization and modernization, planned change, social impact of change.

566 Penology (5)
Prereq: perm. History, practices, and purposes of punishment using organizational, criminological, and sociological perspectives. Effectiveness of rehabilitation programs explored. Alternatives to incarceration examined.

567 Violence Against Women (5)
Prereq: perm. Examines related forms of violence where women are the predominant victims: forcible rape, marital rape, incest, spousal assault, date rape and assault, and sexual harassment. Role of pornography examined. Emphasis on current theoretical and empirical findings and developments.

570 Sex Roles and Inequality (5)
Prereq: 8 hrs sociology and perm. Examination of social influences that affect lives and opportunities of females and males in society, how these social influences interact to foster gender inequalities, and changes that are occurring.

590 Special Studies (1-5, max 10)
Prereq: perm of graduate coordinator. Studies of special topics in basic sociological perspectives, theory, and methods.

600 Graduate Seminar (4-6)
Prereq: perm. Critical examination of selected topic.

601 Graduate Seminar (4-6)
Prereq: perm. Critical examination of selected topic.

602 Graduate Seminar (4-6)
Prereq: perm. Critical examination of selected topic.

603 Seminar in Social Disorganization (4-6)
Prereq: perm. Critical examination of topics in area of social disorganization.

604 Graduate Seminar (4-6)
Prereq: perm. Critical examination of selected topic.

605 Graduate Seminar (4-6)
Prereq: perm. Critical examination of selected topic.

606 Graduate Seminar (4-6)
Prereq: perm. Critical examination of selected topic.

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Prereq: perm. Critical examination of selected topic.

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Prereq: perm. Critical examination of selected topic.

614 Graduate Seminar (4-6)
Prereq: perm. Critical examination of selected topic.

654 Social Research Methods (5)
Prereq: perm. Analysis of process of sociological research in terms of problem definition, research, design, data sources, and methods of data analysis.

690 Independent Study (1-5, max 10)
Prereq: perm of grad chair. For grad students in good standing who wish to undertake independent study toward M.A. degree under guidance of faculty member.

695 Thesis (1-10, max 10)
Prereq: perm of grad chair.

SOUTHEAST ASIAN STUDIES

(See International Affairs)

SPANISH

(See Foreign Languages and Literatures)

SPEECH

(See Hearing and Speech Sciences or Interpersonal Communication)

SWAHILI

(See Foreign Languages and Literatures)

TELECOMMUNICATIONS

The School of Telecommunications offers programs of study leading to the Master of Arts degree in telecommunications and the Doctor of Philosophy degree in mass communication. The doctoral degree is offered in conjunction with the School of Journalism (see Mass Communication).

Five specializations are offered at the master's level: audience analysis, international communication, management, message design, policy regulations, and screenwriting. Individualized programs which combine two or more specializations must be approved by the graduate committee of the school. The master's program prepares students for careers in telecommunications.

The M.A. in public broadcasting management provides theory and application through coursework in the school, minor courses in business administration, and public service administration, and offers practical experience through the Telecommunications Center and through internships. Research associateships are available for women and/or minorities who have full-time public broadcasting experience.

ADMISSION

Admission to graduate study in telecommunications requires a baccalaureate degree for the master's program and a completed master's degree for the Ph.D. degree program. Students should have maintained a 3.0 undergraduate grade-point average on a 4.0 scale, although other factors—professional experience or test results, for example—may qualify students with lower grade-point averages for admission. Doctoral applicants are expected to present academic credentials of a higher caliber. All applicants are required to submit letters of recommendation, scores of the Graduate Record Examination and/or the Miller Analogies Test, and appropriate college transcripts. The prospective student should present previous degree work that includes a reasonable background in electronic media and closely allied areas of communication. Because academic ability, recommendations, and other factors weigh heavily in the admission process, some students may enter graduate study without such a background. On advice from the graduate committee, they will be required to make up this deficiency by enrolling in appropriate undergraduate courses or completing a directed readings program.

The M.A. in screenwriting requires submission of scripts or similar sample material, along with the application.

REQUIREMENTS

The typical master's program consists of a nonthesis sequence of 56 hours, including a minimum of 20 hours in the major field of study and at least 8 hours in a supplementary area. Supplementary areas may be selected from within or outside the College of Communication and may include more than one department. A thesis option exists in which those electing this option will be granted up to 10 credit hours for the completed thesis.

Thesis and nonthesis students are required to take two courses: an introduction to mass communication research methods and a paper-writing seminar. Additional requirements include successful completion of qualifying examinations and approval of a final paper, or presentation of a thesis at the end of the program. Screenwriting students have somewhat different requirements commensurate with their professional writing commitment. Different courses are required, and a completed script (or scripts) will serve as a thesis.

The school requires that a minimum grade-point average of 3.0 be maintained. In addition, those who earn a grade below a B (3.0) in more than two courses are not permitted to continue in the program except in unusual circumstances.

Ph.D. requirements are under Mass Communication.

DEADLINES

To permit an adequate review of credentials, applicants for the fall quarter must submit all materials no later than February 15. Students in the master's program may begin the program only in the fall quarter. Doctoral applications are accepted for any quarter, although there are advantages in starting a program during fall quarter.

FACILITIES

Laboratory facilities are provided by a cable TV production unit, stations WOUB AM-FM-TV, and ongoing contract studies through the school's Institute for Telecommunications Studies.

501 Introduction to Graduate Study (1)
Analysis of scholarship and research as foundation for grad study.
Staff; F; Y; 1993.

513 Studio Audio Production (4)
Prereq: perm. Special problems in audio production, including documentary, live music, and dramatic presentations.
McDaniel, Mould; F; Y; 1992.

518 Advanced Video Production (4)
Prereq: perm. Individual and group projects in production of television program material.
Staff; F, W; Y; 1992.

521 Nonbroadcast Video Systems (4)
Examination of the uses of video in business, industry, and other public service organizations.
Flournoy, Wurtsbaugh; F, W, Sp; 1993.

531 Screenwriting (4)
Writing and critique of form, structure, and presentation of dramatic programs, series, and films.
Miller; W, Sp; Y; 1993.

540 Public Telecommunications (4)
Historical development, current status, and challenges to public telecommunications.
Clift, Welling; W; 1993.

541 Instructional Telecommunications (4)
Using telecommunications in instruction: radio, television, cable, fiber optics, satellite, computer applications in education.
Flournoy; Sp; Y; 1993.

563 New Technology (4)
Investigation of emerging technologies of telecommunications via broadcast, cable, satellite, telephone, and information systems.
Flournoy, Slade; Sp; Y; 1993.

564 Cable Communications (4)
Critical examinations of cable industry, including technical aspects; franchising; programming; local, state, and federal regulation; and public interest service.
Clift, Richie; F, Sp; 1992.

566 Media and Messages in Social Change (5)
Isolates and examines theory and practice associated with conceptualization, design, and execution of communication messages and strategies to promote and support social change.
Cambridge; F; Y; 1993.

567 Multicultural Broadcasting in the U.S.A. (5)
Examines the nature and determinants of multicultural broadcasting in the U.S.A. and its implications for the emerging global communication environment.
Cambridge; W; Y; 1993.

575 Politics and the Electronic Media (4)
Examines complex relationships between electronic media and political process through study of campaign strategy, polling, commercial advertising, and news coverage.
Mould, Sandell; F, Sp; D; 1992.

581 Women and Media (4)
Examines representation of women in media through experiential exploration of individual attitudes and values with respect to culture, sexism, and analysis of media content.
Miller, Sandell; W, Su; 1993.

583 Age, Class, Gender, Race, and Sexual Orientation in the Media (5)
Interrogates images of age, class, gender, race, and sexual orientation in various media (mainstream and alternative) and examines approaches which may be used to interpret these representations. Also considers the potential impact that media institutions have on people's lives and social relations.
Nelson, Sandell; F, Sp, Su; Y; 1993.

586 Colloquium in Telecommunications (1-5)
Intensive study of special topics in field of telecommunications.
Staff; F, W, Sp, Su; D; 1993.

601 Introduction to Mass Communication Research (5)
Examines historical, economic, political contexts in which quantitative and qualitative research emerges. Includes introduction to current quantitative and qualitative techniques.
Sandell; F; Y; 1993.

602 Quantitative Research (5)
Mass communication measurement techniques, research design and implementation, survey, content analysis, and applied statistical analysis.
Rota; Sp; Y; 1993.

603 Qualitative Research (5)
Introduction to qualitative research methodology with an emphasis on phenomenology, semiology, and ethnographic fieldwork.
Nelson; W; Y; 1993.

610 Audio and Video Production (5)
An introductory course for graduate students lacking production experience. Covers audio and video theory and terminology and production planning. Provides experience in audio and video production.
Mould, Richie; W; 1993.

632 Professional Screenwriting (5)
Prereq: perm. Advanced writing course in which the experienced student creates substantive scripts in documentary and dramatic areas.
Miller; F, W, Sp; 1989.

694 Independent Study (1-12)
Prereq: perm. Individual research on special problems. Projects must be approved prior to registration.
Staff; F, W, Sp, Su; Y.

695 Thesis (1-10)
Staff; F, W, Sp, Su; Y.

702 Advanced Quantitative Research (5)
Prereq: 602. Advanced topics in measurement and statistical analysis applied to research in mass communication.
Rota; F; D; 1989.

703 Advanced Qualitative Research (5)
Prereq: 603. Application of various interpretive theories and methods for the sustained explication of ethnographic and interview transcripts.
Nelson; F; Y; 1993.

705 Research Internship (1-9)
Prereq: acceptance by competition only. Provides opportunity to implement and complete major research study under supervision.
Staff; F, W, Sp, Su; Y; 1989.

750 Economics of Telecommunications (5)
Economic structure of broadcast and cable industries, their relationships with other industries, fiscal policies and practices, sources and control of revenue, profit and expenses. Case studies in economic problems and practices.
Staff; W; 1987.

751 Telecommunications Management (5)
Consideration and examination of theory and practice in telecommunications management, organization, personnel management and motivation; examines role of manager in relationship to various telecommunications operations.
Clift, Savage; F; 1993.

753 Telecommunications Law and Regulations (5)
Socio-political control of telecommunications; effect of laws, regulations, and public pressures upon policy.
Clift; W; 1993.

755 Broadcast and Cable Programming (5)
Programming concepts, resources, costs, selection, and scheduling.
Clift; Sp; 1993.

757 Broadcast and Cable Sales Management (5)
Problems and practices of broadcast and cable sales and sales management, policy formation, including projects devoted to commercial inventory and rate structure.
Savage; D; 1985.

759 Audience Research (5)
Various methods, techniques, and applications of audience study in broadcasting and cable; includes study of current rating services.
Staff; Sp; Y.

765 Communication and National Development (5)
Critical analysis of communication and development concepts, theories, and approaches, and examination of how communication can help promote national development and support development projects.
Rota; Sp; Y; 1993.

767 Comparative Systems of Telecommunications (5)
Telecommunications systems of selected countries studied in terms of political, social, economic, and cultural themes.
McDaniel; W; 1993.

769 International Telecommunications (5)
Development, impact, and control of international telecommunications for propaganda, commercial, and social purposes.
Flournoy; Sp; 1989.

770 Mass Communication Theory (5)
Examines a diversity of mid-range theories in mass communication including media dependency, cultivation, uses and gratifications, social learning, and media effects.
Cambridge; F; Y; 1993.

771 Critical/Cultural Theory (5)
Prereq: 770 or perm. Critical and cultural approaches to theorizing mass communication in a mediated society. Emphasis on such contemporary theories as semiotics, deconstruction, feminism, and postmodernism.
Miller; W; Y; 1993.

772 Theory Construction in Mass Communication (5)
Prereq: 770, 771. Focus on developing theoretical perspectives for scholarly work. Includes broader discussion of theory-building in mass communication and media studies.
Sandell; Sp; Y; 1993.

779 History of Broadcasting (5)
Origin of U.S. system of radio and television communication and its development to present.
Staff; Sp; Y; 1992.

784 Television Criticism (5)
Survey of contemporary theories and methods of critical analysis, including semiotics, feminism, and reader response. Screenings include television programs of past and present, avant-garde, and mainstream.
Nelson; Sp; 1993.

804 Seminar in Mass Communication Research (5)
Intensive study of research methodologies in mass communication scholarship; individual projects.
Staff; D; 1993.

843 Seminar in Pedagogy (5)
Problems, methods, and techniques of teaching college-level telecommunications.
Staff; Sp; Y; 1982.

865 Seminar in International Cultural Studies (5)
Examines recent research in cultural studies, with a focus on intercontinental intellectual dialogue. Interrogates received notions of race, nation, gender identity, and development from the point of view of media scholars in Latin America, Africa, Australia, India, England, Canada, and the United States. Explores such

topics as post-colonial discourse, Diaspora studies, and methodological issues.
Nelson, McDaniel; W, Su; D; 1993.

884 Seminar in Criticism (5)
Intensive examination of video as aesthetic and cultural form. Analysis and practice of video criticism.
Staff; Sp; Y; 1992.

894 Independent Study (1-12)
Prereq: perm. Individual research on special problems. Projects must be approved prior to registration.
Staff; F, W, Sp, Su; Y; 1993.

895 Dissertation (1-12)
Staff; F, W, Sp, Su; Y.

■ THEATER

- History and Criticism
- Actor Training
- Director Training
- Production Design and Technology
- Playwriting
- Theater General

The School of Theater offers programs leading to the Master of Fine Arts and Master of Arts degrees. An applicant for admission must have earned a baccalaureate degree from an accredited college or university and be able to demonstrate motivation and talent for the program of his or her choice. In addition, the candidate should present a background of training that correlates with the student's professional goals. For unconditional admission, the student must have a satisfactory academic record, with strong indications of success in his or her chosen area, and sufficient preparation to qualify for graduate courses to be included in the program. Any deficiencies must be made up by taking appropriate courses in addition to normal requirements.

Applicants for admission to one of the professional M.F.A. programs must demonstrate qualification by audition, submission of portfolio, interview, or other appropriate means before final approval is granted (see below). This requirement is in addition to the basic admission standards for entrance into the graduate program of the School of Theater.

It is expected that each candidate will have a firm grounding in theater history and dramatic literature, as well as demonstrable proficiency in fundamental production techniques, or that coverage of these areas will be included in his or her graduate program.

Throughout the program, the student will be closely observed and counseled by the faculty. The student is expected to show consistent progress toward improvement of those skills that the faculty deems necessary for entry into the profession. At the end of every quarter in residence, and, in some programs, also at midterm of each quarter in the initial year of the program, a thorough evaluation will be made of each student. The faculty will discuss with the student the particular areas of strength and weakness in his or her performance and how these areas could affect the professional potential of the student.

If any student, in the judgment of the faculty, fails to meet professional standards or fails to show improvement in necessary skills, the student will be placed on "program probation" for the following quarter. Normally this action will occur at the end of a quarter, and the probation will be for the following quarter. A student may be placed on program probation, however, at any time if the faculty deem it necessary. Written notice of this decision will be provided, along with an explanation of the academic or artistic reasons for why the decision was made. The student will be expected to make improvement immediately in the indicated areas.

At the end of the period of program probation, the area faculty, in consultation with the Director of the School of Theater, will take one of three actions:

1) Remove the student from program probation and recommend continuance in the program.
2) Continue program probation for an additional quarter.
3) Deny further enrollment.

If the student is placed on program probation in the first five weeks of a quarter, the period of probation may extend until the end of that quarter. If the student is placed on probation after the first five weeks of the quarter, the period of probation may extend until the end of the following quarter.

In no case will program probation continue for more than three consecutive quarters.

Students in the Professional Actor Training Program, the Professional Director Training Program, and the Production, Design, and Technology Program must begin their program of study in the fall quarter. Application materials for these programs must be received by April 1. Students in the other M.F.A programs are encouraged to begin their programs in the fall quarter and should observe the April 1 application deadline. An M.A. degree candidate may apply for admission for any quarter.

Applicants seeking financial aid in the form of graduate scholarships or graduate associateships for the following academic year should submit application materials to the School of Theater by March 1. Applicants wishing to apply for financial aid in the form of work study and/or loans should contact the Office of Student Financial Aid and Scholarships. (See the Financial Aid section of this catalog.)

Graduate candidates are required to participate each quarter in the production activities of the school as a supplement to and as an extension of their academic work. In addition, all graduate candidates are required to enroll for Lunchbag Theater Seminar each quarter of residence.

The production program of the school is conducted in two adjoining buildings on the Athens campus. The first is the newly renovated Kantner Hall, housing a comfortable and well-equipped proscenium theater, four small studio-classroom theaters, scenery, props, and costume laboratories, and related facilities. A second mainstage theater, incorporating a thrust stage and capable of modification for use in various theatrical forms, is located in the Radio-Television Communication Building next door. Significant repertory production opportunities are available through the University's Monomoy Theater on Cape Cod (Chatham, Mass.).

Visiting artists from the professional theater are brought to the campus in all areas of the school to augment the teaching of the faculty. Full-term residencies, shorter-term (two or more weeks) residencies, master classes, and audition opportunities with theater professionals are supported by visiting artist funds. Recent visiting artists have included prominent actors, directors, designers, playwrights, administrators, and teachers from England and Europe, as well as the North American commercial and LORT theaters.

M.A. PROGRAM OF STUDY
Theater History and Criticism

The M.A. degree in theater history and criticism is a one-year program requiring 45 credit hours and a minimum of three quarters of residency. The student may elect to either write a thesis or take a comprehensive examination on all coursework. If the student wishes to pursue the thesis program in place of the comprehensive examination program, an additional quarter of residency is expected. In exceptional cases, a quarter of internship with a professional theater as a dramaturg or literary advisor may substitute for the comprehensive examination or thesis.

Requirements include Introduction to Graduate Studies, 4 hours of Practicum, at least 4 hours from both the theater history area and the dramatic criticism area, and no more than 12 hours of electives.

Admission is based on a 3.0 grade-point average in undergraduate work and three letters of recommendation.

Sample Program

Introduction to Graduate Studies

Theater History Sequence
  Greek Theater and Drama
  Roman and Medieval Theater
  Renaissance Theater and Drama
  Restoration and 18th Century Theater
  Baroque European Theater
  19th Century European Theater
  Contemporary Theater
  American Theater and Drama

Dramatic Criticism Series
  Dramatic Criticism I
  Dramatic Criticism II
  Seminar in Theater History
  Seminar in Dramatic Criticism

Practical Work
  Two practicum assignments in production work, e.g., acting, technical production, or public relations crew work.

Electives
  Classes in directing, theatrical design, dance, music, literature, foreign languages, etc., with advice and consent of the major advisor.

Thesis/Comprehensive Exam/Internship

M.F.A. PROGRAMS OF STUDY

The M.F.A.s in the School of Theater are professional degrees. The Professional Actor Training Program and the Professional Director Training Program each require a minimum of 135 credit hours over a nine-quarter (3-year) residency period. The M.F.A. in production design and technology is a professional degree and normally requires a minimum of 135 credit hours over a nine-quarter period, but may also be, with approval of the faculty, a six-quarter program with a 90 credit-hour requirement. The M.F.A. in playwriting is a professional degree and covers 90 credit hours of study. The Theater General M.F.A. Program requires a minimum of 90 credit hours.

Professional Actor Training Program

The Professional Actor Training Program (PATP) seeks to train and prepare students for fulfilling careers as actors. We offer an intense, practical program that develops vocal, physical, and imaginative capacities and a reliable process for approaching a role; strengthens the working technique; and gives the student constant exposure to the techniques of audition, interview, and self-presentation that are necessary for employment in the professional world.

The program consists of a five-day week, with six-to-seven hour time blocks divided among acting, voice, movement, and auxiliary courses designed to meet students' specific needs. The first year focuses on action and character, the second on acting styles in various periods, and the third year involves an internship at a professional theater. Students are eligible for a one-year internship at the Cleveland Playhouse. Third-year PATP students comprise the core of the Cleveland Playhouse Lab Company. Literature and history courses are encouraged, as well as singing, voice, dance, physical education, and others as determined by the advisor.

Production opportunities abound. There is no casting for students during the first quarter of the first year, as the faculty believes in spending that quarter diagnosing and addressing the needs of each student in the class. Thereafter, the school's mainstage productions and the many offerings in the laboratory theater provide constant opportunities for applying the studio work to a performance situation. There is also the opportunity for an intense summer of performing through the University's prestigious Monomoy Theatre on Cape Cod.

There is constant communication among the PATP faculty to advance the training of each student. Quarterly evaluations are scheduled to determine progress and specific areas of strength and weakness in technique. Only those students showing consistent improvement will be invited to continue in the program.

The PATP faculty firmly believe that our students must be constantly challenged to reach for the highest standards of the profession. Therefore, we sponsor the school's visiting artist program and expect at least one quarter of acting opportunity with a leading regional theater to be a part of each student's experience in the program. Most students spend the third year at the Cleveland Playhouse on acting internship.

Admission is by interview and audition only. The PATP is open to a limited number of talented, mature, and motivated candidates.

Minimum requirements for the M.F.A. include 72 credit hours in acting training, 10 credits in acting practicum, 2 credits in technical or management practicum, 15 credits of internship, 10 credits in history/criticism, literature, and introduction to graduate studies, and 12 credits in thesis production. Electives comprise the remaining requirements for a total of 135 credits.

Sample Program

First Year

Fall Quarter
- Introduction to Graduate Studies
- Acting (Actions)
- Movement (Relaxation, Habits)
- Voice (Beginning Linklater)
- Improvisation
- Technical Practicum

Winter Quarter
- Acting (Characterization)
- Movement (Neutral Mask)
- Voice (Linklater Work)
- Elective
- Acting Practicum

Spring Quarter
- Acting (American Scenes)
- Movement (Character Mask)
- Voice (Linklater/Berry)
- Literature Elective
- Acting Practicum

Second Year

Fall Quarter
- Acting (Shakespeare/Verse)
- Movement (Period Movement)
- Voice (Speech, Dialects)
- History/Criticism Elective
- Acting Practicum

Winter Quarter
- Acting (European Naturalism)
- Movement (Period/Character)
- Voice (Dialects & Diction)
- Working with Directors
- Acting Practicum

Spring Quarter
- Acting (Comedy Scenes)
- Movement (Physical Comedy; Commedia Styles)
- Voice (Comedy in Language)
- Music or Dance Elective
- Acting Practicum

Third Year

Professional internship

Professional Director Training Program

The Professional Director Training Program proposes to train directors who will meet the demands of commercial, educational, or community theater. The individual's talents and background will determine the specific program. Of necessity, the number of candidates admitted is limited—three students per year. Admission is granted only upon recommendation by advisors and/or observers of the candidate's previous work and a personal interview with the program head.

The three-year course of study is premised on the belief that time and meaningful opportunities are prime ingredients in any training program. The directing sequence is structured to provide a general orientation in the first year, with emphasis on fundamentals. The second year concerns itself with extended emphasis on process, with several laboratory experiences principally dedicated to experimentation, exploration, error, and analysis. The third year is designed to test conclusions in a more public arena through a major production in residence (the thesis), and to expose the student to professional realities via internship with a major LORT theater or equivalent producing organization. Finally, a quarter of internship with a British theater company is provided by way of extending and deepening the young director's cultural perspective.

Minimum course requirements for the three-year M.F.A. include 78 credits in directing, 4 credits in acting, 8 credits in production design, 12 credits in history and criticism, 4 credits in administration, 17 elective credits principally outside the School of theater, and 12 practicum credits for production work for a total of 135 credits.

Professional Program in Production Design and Technology

The M.F.A. in Production Design and Technology is a three-year program that strives to prepare the student for a professional career. The first year of the program deals primarily with fundamental design principles. The second year focuses on skills, such as drafting, draping, or painting needed to execute these designs. During the third year, emphasis is placed on the student's ability to work independently and to integrate and implement all aspects of the training.

Admission to the program requires either a B.A. or B.F.A. degree and is based on an evaluation of the applicant's portfolio, resume, and recommendations, as well as a review of his or her academic qualifications for graduate work. A visit to inspect the facilities and an interview with the design staff is encouraged.

Total credit hour requirements are based on a normal load of 15-18 credit hours per academic quarter for 9 quarters of residency. Participation in a specified production activity each quarter is required. It is expected that these activities will relate directly to the student's major interests and that, during specified times, they will consist of major production responsibilities such as designing or technical directing for a mainstage production. A thesis project (a complete design project in the student's major and secondary areas of interest) is required for graduation.

At least one quarter of the third year is expected to consist of an internship at a major LORT or commercial theater in the U.S. or Great Britain.

Minimum course requirements for the three year M.F.A. include 70 hours of core courses and at least 65 hours of specific area requirements for a total of 135 hours. Any course may be waived at entry depending upon the background of the individual student.

Program Requirements

Core Courses:
  Introduction to Graduate Studies, Scene Design, Costume History, Lighting Design, Historical Bases of Design

Area Requirements: (Some of these courses are offered by departments other than the School of Theater)

Costume Design
  Costume Design
  Pattern Drafting, Draping, Crafts
  Figure Drawing, Watercolor, Media
  Script Analysis or Directing
  Electives

Scene Design
  Scene Design
  Costume Design
  Drafting, Modelmaking & Painting
  Watercolor, Figure Drawing, Media
  Script Analysis or Directing
  Electives

Technical Production
  Technical Production
  Drafting
  Skills: Metals, Plastics, Props, Special Effects, Furniture Construction, Crafts, Painting, Soft Goods, Modelmaking
  Lighting Production
  Electives

Lighting Design
  Lighting Design
  Lighting Production/Tech Production
  Drafting
  Sound Design/Sound Production
  Script Analysis or Directing
  Electives

Sound Design
  Sound Design & Production (including Music Acoustics, Audio & Recording)
  Tech Production/Light Production
  Lighting Design
  Drafting
  Script Analysis or Directing
  Electives

Playwriting Program

The Professional Playwriting Program at Ohio University leads to the M.F.A degree with the completion of a minimum of 90 credit hours of study. The program of study may include 135 credit hours of coursework (3 years) where appropriate. The minimum requirement of six quarters of residency may be waived if one quarter is spent in an internship with a professional company.

Courses within the School of Theater will generally include selections from the theater history sequence, the dramatic criticism series, and available seminars in directing and acting. Candidates for this degree are expected to fulfill occasional production assignments and may audition for University Theater productions. Courses outside the School of Theater may include seminars in dance, music, literature, etc., and creative writing courses in the Department of English. All candidates for the M.F.A. are expected to complete successfully at least eight hours of Advanced Playwriting (THAR 570).

Student playwrights will be expected to work with second-year students in the Directing Program in THAR 550 for a minimum of three hours of credit (the course may be taken more than once), during which an original script is brought to the point of public reading and perhaps production. The production of school-generated original scripts is not normally a part of the school's production program (although it has happened) but numerous opportunities for public exposure of original work exist through an active laboratory theater program.

Minimum standards for acceptance include a 3.0 grade-point average for undergraduate work and the submission of sample manuscripts that need not be, but usually are, in dramatic form.

Sample Program

Introduction to Graduate Studies

Theater History Sequence
  Greek Theater and Drama
  Roman and Medieval Theater
  Renaissance Theater and Drama
  Restoration and 18th-Century Theater
  Baroque European Theater
  19th-Century European Theater
  Contemporary Theater
  American Theater and Drama

Dramatic Criticism Series
  Dramatic Criticism I
  Dramatic Criticism II
  Seminar in Theater History
  Seminar in Dramatic Criticism
  (Available Seminars in Directing)

Advanced Playwriting

Playwrights Workshop

Electives
  Seminars in dance, music, literature; creative writing courses in Department of English.

Theater General Program

The Theater General degree is intended for exceptional students with demonstrated ability and intellectual maturity who wish to design their own program to satisfy particular academic and/or career goals. This degree program allows the student to study in two or three areas within the School of Theater. A student wishing to pursue arts administration, or stage management for example, may find this degree particularly useful. Various options are available. (NOTE: For those students with additional interests outside the School of Theater, please see Individual Interdisciplinary Programs of Study elsewhere in this catalog.)

Students may receive an M.A. or an M.F.A. upon completion of study.

Program Requirements

(1) M.A. in Theater General
  Requires a minimum of 45 credit hours. If two areas of emphasis are chosen, then each area must include a minimum of 20 credit hours with the appropriate number of elective hours. If three areas of emphasis are chosen, then each area must include a minimum of 15 credit hours.

(2) M.F.A. in Theater General
  Requires a minimum of 90 hours with the possibility of 135 hours for a three-year program. If two areas of emphasis are chosen, then each area must include a minimum of 30 credit hours with the appropriate number of elective hours. If three areas of emphasis are chosen, then each area must include a minimum of 20 credit hours with the appropriate number of elective hours.

(3) Both M.A. and M.F.A. Theater General
  Both degrees require the completion of a final project that may be chosen from these options: (a) written thesis, (b) comprehensive examination, or (c) performance project.

Because of the independent nature of the program, the student must work very closely with his or her advisor at each stage of the program. This unique advisor-advisee relationship encourages inquiry, originality, and determination in the pursuit of the degree.

Students must apply initially with an earned 3.0 g.p.a. in an appropriate undergraduate degree. In addition to the usual application materials, students must submit a plan of study and a statement of goals describing the intent and rationale for pursuing the degree. A visit and interview are strongly encouraged, though not mandatory. A student must have achieved a minimum g.p.a. of 3.3 during the first quarter of residency and have an approved plan of study before the end of the second quarter of residency.

The initial advisor for the degree is the Director of Graduate Studies; another advisor may be chosen or assigned at a later date.

090 Lunchbag Theater Seminar Series (0)
Seminar and discussion about trends in theater scholarship, production, and performance techniques. May be repeated.
  Staff; F, W, Sp.

500 Introduction to Graduate Study (2)
Prereq: grad theater major. Orientation to grad theater study and professional theater.
Quinn; F; Y.

502 Theater Management (4)
Management in performing arts. 3 lec.
Staff; W; Y.

505 Practicum in Theater Management (2-4)
Prereq: perm. Supervised lab practice in problems of theater publicity, finance, ticket office, and house management.
Staff; F, W, Sp, Su; Y.

510A Acting Technique I (6)
Prereq: grad acting majors. Intensive studio training emphasizing actor's work on himself or herself and on text through exercises, monologues, and scene work.
Hurst; F; Y; 1976.

510B Acting Technique II (6)
Prereq: 510A. Continuation of 510A. See 510A for description.
Hurst; W; Y; 1977.

510C Acting Technique III (6)
Prereq: 510B. Continuation of 510A and 510B. See 510A for description.
Hurst; Sp; Y; 1977.

515 Practicum in Acting (2-4)
Prereq: perm. Supervised lab practice in rehearsal and performance.
Staff; F, W, Sp, Su; Y.

516A Basic Movement for the Actor (3)
Prereq: grad acting major. A combination of mind-body-voice work methods addressing movement demands for the actor. Methods used are Todd/Sweigard, Feldenkrais, Selver, Linklater, Corporeal, and Laban Dance. Once there is an understanding of the instrument, the work focuses on clarity of expression, presence, and the energy of acting.
Gabriel; F; Y; 1986.

516B Neutral Mask Mime (J. Lecoq Technique) (3)
Prereq: 516A. Use of the Neutral/Universal Full mask; the actor is given various tasks to accomplish; focus on eliminating the intrusion of actor tension and on simplifying the physical communication through clear and distinct images.
Gabriel; W; Y; 1987.

516C Physical Acting I (3)
Prereq: 516B. Work that allows for the transition between pure movement classes and the specific responsibilities of the actor. Actors are involved in task-oriented exercises offering an opportunity for movement to be observed for clarity and simplicity. Observation addresses personal physicality; rhythms and energy identifies intrusive personal idiosyncrasies; through repetition the actor achieves a more complete metamorphosis and understanding of characterization; monologue work used extensively.
Gabriel; Sp; Y; 1986.

517A Voice and Speech for the Actor (3)
Prereq: grad acting major. Intensive training to develop actor's basic voice and speech skills. Introduction to and proficiency in perception of physical sensations pertaining to voice and speech.
Parrotti; F; Y.

517B Voice and Speech for the Actor (3)
Prereq: 517A. Continuation of 517A. See 517A for description.
Parrotti; W; Y.

517C Voice and Speech for the Actor (3)
Prereq: 517B. Continuation of 517A and 517B. See 517A for description.
Parrotti; Sp; Y.

520A First Principles of Directing (4)
Prereq: grad directing major. First inquiry into nonactor-related prerehearsal considerations, text selection, analysis, space, and environment in relation to concept and design.
Sherman; F; Y.

520B Director/Actor Rehearsal Process (2-6)
Prereq: 520A or perm. Scene work with actors using concept and project explored during previous qtr.
Sherman; W; Y.

520C Directing Project I (6)
Prereq: 520B. Basic rehearsal techniques and procedures.
Sherman; Sp; Y.

525 Practicum in Directing (2-4)
Prereq: perm. Practical experience as directorial staff member for production in public performance, or as director for lab theater experience.
Staff; F, W, Sp, Su; Y.

526 Stage Management (3)
Prereq: perm. Theoretical course in techniques and methods of professional stage management.
Staff; F; Y.

530 Technical Direction (4)
Role and responsibilities of technical director.
St. Lawrence; W; Y.

531A Lighting Design(4)
Prereq: perm. Light as element of design.
St. Lawrence; F; Y.

531B Electrics I (4)
Prereq: perm. Covers elements of technical production practice related to lighting: electrical practice for the stage, the physics/optics of contemporary theatrical equipment, and principles related to color and light as an element of production.
St. Lawrence; W; Y.

532 Advanced Costume Design (4)
Prereq: 538. Advanced problems and projects in theatrical costume.
Fox; W; Y.

534 Scene Design (4)
Prereq: perm. Scene design styles of premodern drama theory and practices. Repeatable to 12 credits.
Staff; F; Y.

535 Practicum in Design and/or Technical Production (2-6)
Prereq: perm. Practical application of design and technical theory.
Staff; F, W, Sp, Su; Y.

537 Studies in Makeup (3)
Prereq: perm. Advanced problems in theatrical makeup design and execution.
Fox; F, W; Y.

538A Historical Bases of Design—Part I (4)
Prereq: major or perm. Research techniques and resources in history, the arts, and period "style" from Antiquity to the early Renaissance in Western Civilizations for theatrical production.

538B Historical Bases of Design—Part II (4)
Prereq: major or perm. A continuation of 538A, covering the period from the high Renaissance to the present.

545 OVST Practicum (1-6)
Prereq: perm. Supervised practice and experimentation in the company operation of a community theater performance project. May be repeated for credit.
Staff; Su.

550 Playwrights Workshop (3, max 9)
Prereq: perm, prior approval, and acceptance of scripts. Practical workshop study and production of plays written by students.
Quinn; W, Sp; Y.

575 Dramatic Criticism I (4)
Principles of dramatic criticism from Aristotle to modern theater. 3 lec.
Quinn; F; Y.

576 Dramatic Criticism II (4)
Prereq: 575 or perm. Modern dramatic criticism from time of Ibsen to present. 3 lec.
Quinn; W; Y.

605 Practicum in Theater Management (2-4)
Prereq: perm. Supervised lab practice in problems of theater publicity, finance, ticket office, and house management.
Staff; F, W, Sp, Su; Y.

606 Individual Projects in Performance Management (6)
Prereq: perm. Working with performance management projects selected in advance of course. Orientation may be production or research.
Fraze; F, W, Sp, Su; Y.

610A Advanced Problems in Acting and Performance (6)
Prereq: 510C. Continued intensive studio training centering on audition material, characterization, and special problems such as period plays and experimentation.
Hurst; F; Y.

610B Advanced Problems in Acting and Performance (6)
Prereq: 610A. Continuation of 610A. See 610A for description.
Hurst; W; Y.

610C Advanced Problems in Acting and Performance (6)
Prereq: 610B. Continuation of 610A and 610B. See 610A for description.
Hurst; Sp; Y.

615 Practicum in Acting (2-4)
Prereq: perm. Supervised lab practice in rehearsal and public performance of roles.
Staff; F, W, Sp, Su; Y.

616A Advanced Movement for Actors (3)
Prereq: 516C. Continuation of 516B; focus on classical comedy.
Gabriel; F; Y; 1986.

616B Advanced Movement for Actors (3)
Prereq: 616A. Use of extremely expressive masks to extend the actor into characterization. The work demands believable support externally and internally for grotesque persona. Clarifies strong sense of flexibility, imagination, line, and strength.
Gabriel; W; Y; 1987.

616C Advanced Movement for Actors (3)
Prereq: 616B. Historical information leading to the development and decline of the commedia del arte characters, basic scenarios, and improvisation. An expansion of the character masks both physically and vocally leading to characterization appropriate to the spirit of commedia del arte.
Gabriel; Sp; Y; 1986.

617A Advanced Voice and Speech for the Actor (3)
Prereq: 517C. In-depth extension of work started in 517ABC. Advanced techniques to refine further and develop use of voice and speech as instrument for characterization.
Parrotti; F; Y.

617B Advanced Voice and Speech for the Actor (3)
Prereq: 617A. Continuation of 617A. See 617A for description.
Parrotti; W; Y.

617C Advanced Voice and Speech for the Actor (3)
Prereq: 617B. Continuation of 617A and 617B. See 617A for description.
Parrotti; Sp; Y.

620A Individual Projects in Directing (6)
Prereq: 520C. Working with full-length text in class or lab theater/playwright's workshop presentation. Emphasis on scripted materials in forms and modes previously unfamiliar to student.
Sherman; F; Y.

620B Improvisational Techniques in Directing (2-4)
Prereq: perm, 2nd yr grad director. Working with nonscripted material under leadership of master teacher.
Sherman; W; Y.

620C Advanced Individual Projects (6)
Prereq: 620A. Working with full-length text in class or lab theater/playwright's workshop presentation. Emphasis on new areas of examination.
Sherman; Sp; Y.

621 Directors on Directing (2)
Prereq: 520A,B,C or perm. Theoretical and historical readings and discussion.
Sherman; W; Y.

625 Practicum in Directing (2-4)
Prereq: perm. Practical experiences in directing actors in special projects outside of class, i.e., lab theater, playwright's workshop, or other approved assignments.
Staff; F, W, Sp, Su; Y.

626 Practicum in Stage Management (2-4)
Prereq: 526. Practical experience in production stage management.
Staff; F, W, Sp, Su; Y.

630 Advanced Technical Direction (4)
Prereq: 530.
Staff; Sp; Y.

631 Advanced Lighting Techniques (4)
Prereq: 531.
Lacy; W; Y.

632 Advanced Costume Design (4)
Prereq: 532.
Fox; Sp; Y.

633 Touring: Production Design (12)
Prereq: grad production design major. Practical course to familiarize advanced design and technical production students with solution of problems inherent in touring theatrical productions.
Staff; F, W, Sp, Su; Y.

634 Advanced Scene Techniques (4)
Prereq: 534.
Lacy; W; Y.

635 Practicum in Design and/or Technical Production (2-6)
Prereq: perm. Practical application of design or technical theory in planning and execution of University production in 2nd yr of training.
Staff; F, W, Sp, Su; Y.

636A Model Construction for the Scene Designer (4)
Prereq: perm. An introduction to the materials and techniques of model construction for the stage. Repeatable to 8 credits.
Belden; W; Y.

636B Drafting for the Stage (4)
Prereq: perm. Fundamental and advanced problems of drafting for the stage. The course is geared to the set designer, the lighting designer, and the student of technical direction. Repeatable to 8 credits.
Belden; Sp; Y.

636C Costume Crafts Construction (4)
An introduction to materials and techniques used in theatrical crafts construction. Casting materials, mask making, and soft sculpture techniques will be emphasized.
Cole; F; Y.

636D Costume Period Patterning (4)
Prereq: 535. An introduction to period patterning techniques.
Cole; W; Y.

636E Scene Painting (1-4)
Prereq: perm. An introduction to painting techniques, materials, and color problems for the stage.
Staff; W; A-even.

637A Sound Design I (4)
Prereq: 637B. An introduction to sound design for the stage. Resources and principles for the theatrical sound designer.
St. Lawrence; Sp; A-odd.

637B Sound Production (4)
Prereq: perm. An introduction to sound production, techniques, and principles for the stage.
St. Lawrence; Sp; A-even.

639 Independent Studies in Design and/or Technical Theater (1-6)
Prereq: perm.
Staff; F, W, Sp, Su; Y.

670 Seminar in Theater History (4)
May be repeated as topic changes.
Quinn; Sp; A.

675 Seminar in Dramatic Criticism (4)
May be repeated as topic changes.
Quinn; Sp; A.

690 Directed Instruction (1-3, max 9)
Prereq: perm. Supervised practice in instructing.
Staff; F, W, Sp; Y.

695 Thesis (1-12)
Prereq: perm.
Staff; F, W, Sp; Y.

702 Theater Administration (4)
Organization and administration of educational, community, and resident theater.
Staff; Sp; Y.

708 Internship in Performing Arts Management (12-18)
Prereq: perm. Student is assigned to management area of a professional performing arts organization and performs duties and responsibilities under the tutelage of a trained working professional. Combines student's theoretical study with practical application of concepts of theater management and administration.
Fraze; D.

705 Practicum in Theater Management (24)
Prereq: 505 or 605 and 702. Specialized lab projects relating to management of Ohio University Theater.
Staff; F, W, Sp, Su; Y.

709 Independent Studies in Theater Management (1-6)
Prereq: perm.
Staff; F, W, Sp, Su; Y.

713 Internship in Acting (6-15)
Prereq: 510A,B,C; 610A,B,C, and perm. Residence with professional theatrical company.
Staff; F, W, Sp; Y.

715 Practicum in Acting (4-6)
Prereq: 510 A,B,C; 610A,B,C. Performance of leading roles in major productions.
Staff; F, W, Sp; Y.

718 Thesis Performance in Acting (12)
Prereq: 3rd-yr grad, perm. Preparation, rehearsal, and performance of a role for public performance.
Keys; D.

719 Independent Studies in Acting (1-6)
Prereq: acting major.
Staff; F, W, Sp; Y.

723 Internship in Directing (6-15)
Prereq: 520A,B,C; 620A,B,C. Residence with professional theatrical company.
Staff; F, W, Sp, Su; Y.

726 Advanced Practicum in Stage Management (4-8)
Prereq: perm. Supervised production experience involving major mainstage responsibility.
Staff; D.

728 Thesis Production for Directors (12)
Prereq: 520A,B,C; 620A,B,C. Preparation, rehearsal, and presentation of fully mounted play for public performance.
Staff; F, W, Sp; Y.

729 Independent Studies in Directing (1-6)
Prereq: perm.
Staff; F, W, Sp; Y.

730 Advanced Technical Studies (4, max 8)
Prereq: perm.
Staff; F, W, Sp; Y.

731 Advanced Lighting Studies (4)
Prereq: 631. Theory and practice.
Staff; F, W, Sp; Y.

732 Studies in Costume Design (4, max 12)
Prereq: 632.
Fox; F, W, Sp; Y.

733 Internship in Design or Technical Production (6-15)
Prereq: 2nd or 3rd yr grad production design major. Residence with professional theatrical company.
Staff; F, W, Sp, Su; Y.

734 Studies in Scene Design (4, max 12)
Prereq: perm.
Staff; F, W, Sp; Y.

735 Practicum in Design and/or Technical Production (2-8)
Prereq: perm and 3rd yr production design major. Practical application of design or technical theory in planning and execution of University production in 3rd yr of training.
Staff; F, W, Sp; Y.

738 Seminar in Production Design (4-12)
Prereq: perm.
Staff; F, W, Sp, Su; Y; 1986.

750 Seminar in Dramatic Writing (4-8, max 16)
Prereq: perm.
Quinn; F, W, Sp; Y.

759 Independent Studies in Playwriting (1-6)
Prereq: perm.
Staff; F, W, Sp; Y.

763 Internship for Stage Managers (6-15)
Prereq: perm. Supervised work and observation experience at a professional theater company or in association with a professional production of theater, opera, or dance.
Staff; D.

770 Greek Theater and Drama (4)
First in series of 8 seminars covering in-depth theater and drama of Western world from prehistoric times to contemporary. 3 lec.
Staff; F; Y.

771 Roman and Medieval Theater (4)
Staff; W; Y.

772 Renaissance Theater and Drama (4)
Staff; Sp; Y.

773 Restoration and 18th Century Theater (4)
Quinn; D.

774 Baroque European Theater (4)
Quinn; F; Y.

775 19th Century European Theater (4)
Quinn; W; Y.

776 Modern Theater (4)
Quinn; Sp; Y.

777 American Theater and Drama (4)
Prereq: perm. Study of significant movements and major playwrights of the American theater, with an emphasis on the 20th century.
Staff; F.

779 Independent Studies in History and Criticism (1-6)
Prereq: perm.
Staff; F, W, Sp; Y.

■ VISUAL COMMUNICATION

The School of Visual Communication does not offer an advanced degree program. However, a student who wishes to study visual communication at the graduate level can apply for the Master of Arts degree in the School of Art or the Master of Science degree in the School of Journalism. The following graduate courses are taught by the School of Visual Communication:

501 Aspects of Photo Communication (5)
A course to develop skills in visual perception, technique, and visual communication. Class is repeatable up to 20 hours but does not count towards the M.A. or M.S. degree.
Pieratt.

511 Informational Graphics (5)
Prereq: perm. Deals with visual presentation of quantitative and spatial information. Covers the planning, design, and computer preparation of charts, graphs, diagrams, and maps for use in newspapers and magazines.
Carr.

512 Advanced Informational Graphics (5)
Prereq: 511. Visual presentation of spatial information with emphasis on design and production techniques as they pertain to newspapers and magazines.
Carr.

514 Desktop Publishing (4)
Prereq: none. An introduction to the production, design, and technique of desktop publishing. Will demonstrate the use of various desktop publishing, drawing, and word processing software in exploring the unlimited flexibility of self publishing with microcomputers.
Carr.

520 Topic Seminar (2)
Prereq: M.A. students only. A flexible format for examining current and future topics in visual communication. Because of constantly changing trends in the profession, topics will vary as an area of need not covered in an existing class is identified. Topics will include the areas of rapid change such as technology, techniques, ethics, and aesthetics.
Staff.

521 Documentary/Essay (5)
Prereq: ART 592A. The use of still photography as a tool for social, anthropological, and journalistic investigation of contemporary issues. Using methods defined by traditional field researchers, the class will expand the use of the photograph for collection and interpretation of selected subjects.
Staff.

522 Graduate Seminar (1)
Prereq: M.A., M.S.J. students only. Seminar deals with such topics as ethics, current trends, internships, information from recent visits to newspapers or meetings. Professionals visiting campus will also be asked to speak in this informal setting on topics concerning the visual communication profession.
Staff.

523 Publication Layout and Design (3)
Prereq: JOUR 536. Examines historic and contemporary theories of layout and make-up design. Using computer systems that simulate pagination programs, students will investigate methods of combining type, graphics, and photographs on the printed page.
Staff.

526 Advanced Publication Layout and Design (3)
Prereq: VICO 523. Advanced study in the use of computers as a tool for layout, design, and pagination for print media.
Staff.

527 Advanced Photographic Illustration: Business Practices (5)
Prereq: M.A. illustration majors only. An investigation of the principles of studio management. Areas of study include copyright, computer usage, self-promotion, financial management.
Staff.

528 Advanced Photographic Illustration: Studio Practices (5)
Prereq: M.A. illustration majors only. Advanced studio methods in the design and execution of illustration images. Particular emphasis placed on the professional performance in producing images using advanced equipment and techniques.

Staff.

529 Advanced Photographic Illustration: Applications (5)
Prereq: M.A. illustration majors only. A synthesis of business and photographic skills. Students given simulations based on a complete project concept that reflects the realities of working professionally.

Staff.

■ WOMEN'S STUDIES

The Women's Studies Program offers a graduate certificate in women's studies. Students enrolled in any master's or doctoral program at the university may pursue this certificate by taking WS 500 plus three of the courses listed below for a total of 17-20 credit hours. Two of the three courses must be outside the student's major field of study.

The following courses are offered by departments and cross-listed under women's studies. The description of these courses can be found listed under the various departments. In addition to the courses listed here, several departments, particularly the Department of English, regularly offer graduate courses under such titles as "Special Topics" and/or "Colloquium" that focus on women and gender and that carry credit toward the graduate Women's Studies Certificate.

AAS 582	The Black Family
ANTH 545	Gender in Cross-Cultural Perspective
HLTH 527	The Health of Women
HIST 514	Women in American History
HIST 560	Women in European History
INCO 621	Gender and Communication
INCO 622	Communication in the Family
POLS 519	Gay Politics
POLS 520	Women, Law, and Politics
POLS 578	Feminist Political Theories
SOC 567	Violence Against Women
SOC 470	Sex Roles and Inequality
TCOM 581	Women and Media

500 The New Scholarship on Women: The Question of Difference (5)
Question of sexual differences has both plagued and motivated contemporary feminist analyses. Course explores what new scholarship on women going on in diverse disciplines contributes to question of differences between women and men so students can approach issue of difference in responsible, critical, and rigorous ways.

590 Independent Reading (1-4, max 4)
Directed individual reading and research.

Departmental Faculty

The following listings were submitted by the dean's office in each college in May 1993 and verified in the Provost's Office. The regional campus faculties are listed after the main campus faculty.

Accounting

O'Bleness Prof: E. James Meddaugh (chair), Ph.D., *Penn State U.*, C.P.A.

Prof: Ted R. Compton, Ph.D., *U. of Cincinnati*, C.M.A., C.S.P.; Charles H. D'Augustine (emeritus, part-time), Ph.D., *Florida State U.*, C.P.A.; William M. Voss, Ph.D., *U. of Chicago.*

Assoc. Prof: James S. Cox, Ph.D., *U. of Pittsburgh*, C.P.A.; Leon B. Hoshower, Ph.D., *Michigan State U.*, C.P.A.; Florence C. Sharp, Ph.D., *U. of Illinois, Urbana-Champaign*, C.P.A.; Robert F. Sharp, Ph.D., *U. of Texas, Austin*, C.P.A.; Donald V. Stuchell, M.A.S., *U. of Illinois*, C.P.A.

Asst. Prof: Carol A. Hilton, Ph.D., *U. of Arkansas*; Joseph N. Hilton, Ph.D., *U. of Arkansas.*

Instr: Olin Adams III, M.B.A., *Mount St. Mary's College*, C.P.A.

Aerospace Studies

Prof: Mark G. Rhoades (chair), M.A., *Pepperdine U.*

Asst. Prof: David E. Saville, M.A., *Embry-Riddle U.*; Darrell D. Slone, M.B.A., *Webster U.*

Afro-American Studies

Prof: Francine C. Childs, Ed.D., *East Texas State U.*

Assoc. Prof: Robert Rhodes, M.A., *U. of Cincinnati* and M.S., *Atlanta U.*; Vattel T. Rose (chair), Ph.D., *U. of Minnesota.*

Art

Prof: Joseph Bova (director), M.F.A., *U. of New Mexico*; Terrill Eiler, M.F.A., *Ohio U.*; Abner Jonas, M.F.A., *U. of Iowa*; David R. Klahn, M.F.A., *U. of Wisconsin, Madison*; William Kortlander, Ph.D., *U. of Iowa*; Ronald Kroutel, M.F.A., *U. of Michigan*; Mary Manusos, M.F.A., *U. of Wisconsin*; Karen Nulf, M.A., *Michigan State U.*; Gary Pettigrew, M.F.A., *Ohio U.*; Daniel Williams, M.A., *U. of Oregon.*

Assoc. Prof: Marilyn Bradshaw, Ph.D., *Indiana U.*; Robert Borchard (emeritus, part-time), M.S., *U. of Wisconsin*; Aethelred Eldridge, M.S.D., *U. of Michigan*; Erik Forrest, A.T.D., *U. of Edinburgh*; Michael Harper, Ph.D., *U. of North Carolina*; Charles McWeeny, M.F.A., *Oklahoma U.*; Robert Peppers, M.F.A., *Ohio U.*; Judith Perani, Ph.D., *Indiana U.*; Marilyn Poeppelmeyer, M.F.A., *SUNY, Buffalo*; Brad Schwieger, M.F.A., *Utah State U.*; Gary Schwindler, Ph.D., *U. of California, Los Angeles.*

Asst. Prof: Carolyn Cardenas, M.F.A., *Drake U.*; B. Deahl, B.A., *U. of Iowa*; Eva Enderlein, M.F.A., *Indiana U.*; Joseph Lamb, Ph.D., *U. of California, Santa Barbara*; Robert Lazuka, M.F.A., *Arizona State U.*; Duane McDiarmid, M.F.A., *Florida State U.*; Fiona Mitchell, M.F.A., *U. of Oklahoma*; Arlyn Simon, M.F.A., *Yale U.*; Mark Uskavitch, M.F.A., *Virginia Comnmonwealth U.*

Aviation

Prof: Joan Mace (emerita, part-time), B.S., *Ohio U.*

Asst. Prof: Ronald Faliszek, B.B.A., *Ohio U.*

Instr: Brent Harmes (part-time), B.B.A., *Ohio U.*; Jeff Kelly (part-time), B.S.A.S., *Ohio U.*; Joseph Kuhn (part-time), B.G.S., *Ohio U.*; David E. Samuels (part-time), B.S.A.S., *Ohio U.*

Biological Sciences

Goll Ohio Eminent Research Scholar: John Kopchick, Ph.D., *U. of Texas, Houston.*

Prof: Ronald Downey, Ph.D., *U. of Nebraska*; Joseph Eastman, Ph.D., *U. of Minnesota*; Fredrick Hagerman, Ph.D., *Ohio State U.*; Robert Hikida, Ph.D., *U. of Illinois*; William Hummon, Ph.D., *U. of Massachusetts, Amherst*; Joseph Jollick, Ph.D., *West Virginia U.*; Siegfried Maier, Ph.D., *Ohio State U.*; Ellengene Peterson, Ph.D., *U. of California, Riverside*; William Romoser, Ph.D., *Ohio State U.*; Jerome Rovner, Ph.D., *U. of Maryland*; Michael Rowe, Ph.D., *U. of California, Riverside*; Gerald Svendsen, Ph.D., *U. of Kansas.*

Assoc. Prof: Huzoor Akbar, Ph.D., *Australian National U.*; Charles Atkins, Ph.D., *North Carolina State U.*; Mary Chamberlin, Ph.D., *U. of British Columbia*; Robert Colvin, Ph.D., *Rutgers U.*; Walter Costello, Ph.D., *Boston U.*; Ralph DiCaprio, Ph.D., *U. of Alberta, Edmonton*; Kenneth Goodrum, Ph.D., *U. of Texas, Austin*; Oscar Heck, Ph.D., *Washington State U.*; William Henley, Ph.D., *Colorado State U.*; John Howell, Ph.D., *U. of California, Los Angeles*; Patricia Humphrey, Ph.D., *Purdue U.*; Louise Luckenbill, Ph.D., *Brown U.*; Donald Miles, Ph.D., *U. of Pennsylvania*; Malcolm Modrzakowski, Ph.D., *U. of Georgia*; Scott Moody, Ph.D., *U. of Michigan*; Finnie Murray (chair), Ph.D., *U. of Florida*; Ronald Portanova, Ph.D., *Case Western Reserve U.*; Edwin Rowland, Ph.D., *Wake Forest U.*; Robert Staron, Ph.D., *Ohio U.*; Matthew White, Ph.D., *Virginia Tech*; James Wilson, Ph.D., *U. of Michigan*; Leon Wince, Ph.D., *West Virginia U.*; John Zook, Ph.D., *Duke U.*

Asst. Prof: Bonita Biegalke, Ph.D., *U. of Washington*; Audrone Biknevicius, Ph.D., *John Hopkins U.*; Anthony Brown, Ph.D., *King's College, U. of London*; William Holmes, Ph.D., *U. of California, Los Angeles*; Scott Hooper, Ph.D. *Brandeis U.*; Frank Horodyski, Ph.D., *U. of California, San Diego*; Calvin B. L. James, Ph.D., *Howard U.*; Nobuyuki Kuwabara, Ph.D., *Sophia U.*; Anne Loucks, Ph.D., *U. of California, Santa Barbara*; Brent Palmer, Ph.D., *U. of Florida*; Malcolm Powell, Ph.D., *U. of Georgia*; Stephen N. Reilly, Ph.D., *Southern Illinois U.*; Linda Ross, Ph.D., *U. of Texas, Austin.*

Lect: Janice Gault, M.S., *Ohio U.*; Mary Nossek, M.S., *Ohio U.*

Chemistry

Dist. Prof: William Huntsman, Ph.D., *Northwestern U.*

Prof: John Blazyk, Ph.D., *Brown U.*; David Hendricker, Ph.D., *Iowa State U.*; Peter Johnson, Ph.D., *U. of Birmingham*; Howard Latz, Ph.D., *U. of Florida*; Paul Sullivan, Ph.D., *U. of Waterloo*; James Tong, Ph.D., *U. of Wisconsin, Madison*; Thomas Wagner, Ph.D., *Northwestern U.*; Robert Winkler, Ph.D., *U. of Michigan.*

Assoc. Prof: Jared Butcher, Jr., Ph.D., *U. of Tennessee*; Howard D. Dewald, Ph.D., *New Mexico State U.*; Karen E. Eichstadt, Ph.D., *U. of Kansas*; Keith F. McDaniel, Ph.D., *Princeton U.*; Gary Pfeiffer, Ph.D., *Carnegie Mellon U.*; Hugh H. Richardson, Ph.D., *Oklahoma State U.*; Gary Small, Ph.D., *U. of North Carolina*; Gene Westenbarger (acting chair), Ph.D., *U. of California, Berkeley.*

Asst. Prof: Peter deB. Harrington, Ph.D., *U. of North Carolina*; Frederick R. Lemke, Ph.D., *Purdue U.*; Lauren E. McMills, Ph.D., *Michigan State U.*; Mark C. McMills, Ph.D., *Michigan State U.*; Martin T. Tuck, Ph.D., *U. of Tennessee.*

Classical Languages

Assoc. Prof: Robert Stephen Hays (chair), Ph.D., *U. of Texas, Austin.*

Asst. Prof: James A. Andrews, Ph.D., *U. of California, Berkeley*; William Owen, Ph.D., *Yale U.*

Instr: Maureen B. Ryan, Ph.D., *Ohio State U.*

Communication Systems Management

Assoc. Prof: Phyllis W. Bernt (director), Ph.D., *U. of Nebraska, Lincoln.*

Asst. Prof: Thomas Dunlap, M.S., *Ohio U.*; Dennis Fouty, M.B.A., *U. of Nebraska, Lincoln*; Hans Kruse, Ph.D., *Vanderbilt U.*; Don Mainley, J.D., *George Mason U. School of Law*; Anthony G. Mele, B.S., *Ohio U.*

Comparative Arts

Prof: Robert Wortman (emeritus, part-time), Ph.D., *Florida State U.*

Assoc. Prof: Jessica Haigney, Ph.D., *Ohio U.*

Computer Science

Prof: Richard Butrick, Ph.D., *Columbia U.*; Yin-Min Wei, Ph.D., *U. of Iowa.*

Assoc. Prof: Klaus Eldridge, Ph.D., *U. of Colorado*; John Gillam, Ph.D., *Michigan State U.*

Asst. Prof: Larry Irwin, M.S., *Ohio U.*; Kleanthis Psarris, Ph.D., *Stevens Institute of Technology.*

Dance

Prof: Gladys Bailin (director), B.A., *Hunter College*; Madeleine Scott, M.A., *U. of California, Los Angeles.*

Assoc. Prof: Patricia Brooks, B.S., *Wayne State U.*; Michelle Geller, M.F.A., *New York U. School of the Arts.*

Asst. Prof: Andre Gribou, M.M., *Juilliard School of Music*; Marina Walchi, M.F.A., *Ohio U.*

Lect: Frederick Kraps (part-time).

Economics

Dist. Prof: Lowell Gallaway, Ph.D., *Ohio State U.*; Lee Soltow (emeritus, part-time), Ph.D., *U. of Wisconsin, Madison*; Richard Vedder, Ph.D., *U. of Illinois.*

Prof: Douglas Adie, Ph.D., *U. of Chicago*; Edwin Charlé (emeritus, part-time), Ph.D., *Indiana U.*; Burton DeVeau (emeritus, part-time), Ph.D., *U. of Minnesota*; Ismail Ghazalah, Ph.D., *U. of California, Berkeley*; David Klingaman, Ph.D., *U. of Virginia*; Rajindar K. Koshal, Ph.D., *U. of Rochester*; Vishwa Shukla, Ph.D., *U. of Wisconsin, Madison.*

Assoc. Prof: Roy Boyd, Ph.D., *Duke U.*; Khosrow Doroodian, Ph.D., *U. of Oregon*; Jan Palmer (chair), Ph.D., *Michigan State U.*; Rosemary

Rossiter, Ph.D., *U. of Wisconsin, Milwaukee.*

Asst. Prof: Tony Caporale, Ph.D., *George Mason U.*; Gregg Frasco, Ph.D., *Cornell U.*; Chulho Jung, Ph.D., *U. of Michigan*; Kathryn G. Marshall, Ph.D., *U. of California, Berkeley*; Harold Winter, Ph.D., *U. of Rochester.*

Instr: Frank Kelly, Ph.D., *Indiana U.*

Education-Applied Behavioral Sciences and Educational Leadership

Prof: Robert Barcikowski, Ph.D., *SUNY, Buffalo*; Fred Dressel (part-time), Ed.D., *Indiana U.*; Max Evans (emeritus, part-time), Ph.D., *Ohio State U.*; James Grubb (emeritus, part-time), Ph.D., *Ohio U.*; Luther Haseley (emeritus, part-time), Ed.D., *U. of Toledo*; Richard Hazler, Ph.D., *U. of Idaho*; Donald Knox (emeritus, part-time), Ed.D., *Case Western Reserve U.*; Richard Miller, Ph.D., *Columbia U.*; Conrad W. Snyder, Ph.D., *U. of Pennsylvania*; Thomas Sweeney (emeritus, part-time), Ph.D., *Ohio State U.*; Melvin Witmer (emeritus, part-time), Ph.D., *Florida State U.*

Assoc. Prof: Thomas Davis, Ph.D., *Ohio State U.*; Glenn Doston, Ph.D., *Northwestern U.*; Crystal Gips, Ed.D., *Boston U.*; George Johanson, Ed.D., *U. of Massachusetts*; Sally Navin, Ph.D., *Ohio State U.*

Asst. Prof: Patricia Beamish, Ed.D., *West Virginia U.*; James Hartman, Ph.D., *Kent State U.*; Lisa Lopez Levers, Ph.D., *Kent State U.*; Frances Pearson, Ph.D., *Ohio State U*; Christopher Sny, Ph.D., *U. of Wisconsin.*

Education-Curriculum and Instruction

Prof: Larry Jageman, Ed.D., *U. of Northern Colorado*; Monroe Johnson, Ed.D., *U. of Tennessee*; Albert Leep, Ed.D., *Ball State U.*; Ralph Martin, Ph.D., *U. of Toledo*; Ragy Mitias, Ph.D., *Ohio State U.*; Reba Pinney (emerita, part-time), Ph.D., *Ohio U.*; William Rader, Ph.D., *Purdue U.*; Stephen Safran, Ph.D., *U. of Virginia*; H. Wells Singleton (dean), Ph.D., *Stanford U.*; Ray Skinner (emeritus, part-time), Ph.D., *Kent State U.*; Charles Smith, Jr., Ed.D., *Wayne State U.*; Edward Stevens, Jr., Ed.D., *U. of Rochester*; James Thompson (emeritus, part-time), Ph.D., *Ohio State U.*; George Wood, Ph.D., *U. of Illinois.*

Assoc. Prof: Arthur Clubok, Ph.D., *U. of Michigan*; R. Keith Hillkirk, Ph.D., *Penn State U.*; Stephen Howard, Ph.D., *Michigan State U.*; John McCutcheon, Ed.D., *Indiana U.*; Joan McMath, Ph.D., *U. of Akron*; Sondra Rebottini, Ed.D., *West Virginia U.*; Barbara Reeves, Ed.D., *U. of Kentucky*; Marta Roth, Ed.D., *West Virginia U.*; William Smith, Ed.D., *Indiana U.*; Scott Sparks, Ph.D., *U. of Florida*; Karen J. Viechnicki, Ph.D., *Kent State U.*; James Yanok, Ph.D., *Kent State U.*

Asst. Prof: Bonnie Beach, Ph.D., *Ohio U.*; Alice Blake-Stalker, Ph.D., *U. of Georgia*; Michael Flemister, M.A., *Central Michigan U.*; Evelyn Reid, Ph.D., *U. of Wisconsin, Madison*; Sallie Roberts, M.A., *Ohio U.*

Instr: Betty Mason, M.Ed., *Ohio U.*; Joan Safran, Ph.D., *U. of Virginia* ; Coleen Sexton, Ph.D., *Ohio U.*; Dawn Stout, Ph.D., *Ohio U.*

Education-Professional Laboratory Experiences

Prof: Carolyn Tripp, M.Ed., *Ohio U.*; Rena Allen, M.A., *Marshall U.*

Instr: Bonnie Bailey, M.Ed., *Indiana U. of Pennsylvania*; Diane Burkhart, M.Ed., *Kent State U.*; Howard Delamatre, M.Ed., *Bowling Green State U.*; Connie Scott, M.Ed., *Ohio U.*

Engineering, Chemical

Prof: William Baasel (emeritus, part-time), Ph.D., *Cornell U.*; Calvin Baloun, Ph.D., *U. of Cincinnati*; Nicholas Dinos, Ph.D., *Lehigh U.*; W. Paul Jepson (chair), Ph.D., *Heriot-Watt U., Scotland*; Michael Prudich, Ph.D., *West Virginia U.*

Assoc. Prof: Wen-Jia Russell Chen, Ph.D., *Syracuse U*; Daniel Gulino, Ph.D., *U. of Illinois, Urbana-Champaign*; Kendree Sampson, Ph.D., *Purdue U.*

Asst. Prof: Tingyue Gu, Ph.D., *Purdue U.*; Darin Ridgway, Ph.D., *Florida State U.*

Engineering, Civil

Prof: Glenn Hazen (chair), Ph.D., *Penn State U.*; Harry Kaneshige, Ph.D., *U. of Wisconsin, Madison*; Gayle Mitchell, Ph.D., *Mississippi State U.*; Shad Sargand (Russ Prof.), Ph.D., *Virginia Polytechnic Institute and State U.*

Assoc. Prof: Tiao Chang, Ph.D., *Purdue U.*; Edward Russ (emeritus, part-time), M.S.C.E., *Clarkson College of Technology.*

Asst. Prof: Kenneth B. Edwards, Ph.D., *Iowa State U.*; William Greer, Ph.D., *U. of Arizona*; Joseph Recktenwald, Ph.D., *U. of Akron*; Eric P. Steinberg, Ph.D., *Michigan Tech. U.*

Engineering, Electrical and Computer

Prof: Hollis Chen, Ph.D., *Syracuse U.*; Joseph Essman, Ph.D., *Purdue U.*; James Gilfert (emeritus, part-time), Ph.D., *Ohio State U.*; Herman Hill, Ph.D., *West Virginia U.*; Harry Hoffee (emeritus, part-time), M.S.E.E., *Ohio U.*; Robert Judd (Cooper Industries Prof.), Ph.D., *Oakland U.*; Harold Klock, Ph.D., *Northwestern U.*; Robert Lilley (part-time), Ph.D., *Ohio U.*; Henryk Lozykowski, Ph.D., *N. Copernicus U.*; Brian Manhire, Ph.D., *Ohio State U.*; Richard McFarland (Russ Prof., emeritus, part-time), Ph.D., *Ohio State U.*; Jerrel Mitchell (Russ Prof., chair), Ph.D., *Mississippi State U.*; M.E. Mokari, Ph.D., *U. of Illinois*; Roger Radcliff, Ph.D., *West Virginia U.*; William Shepherd (Stocker Visiting Prof.), Ph.D., *U. of London*; Janusz Starzyk, Ph.D., *Technical U.,Warsaw.*

Assoc. Prof: Mehmet Celenk, Ph.D., *Stevens Institute of Technology*; Robert Curtis, Ph.D., *New York U.*; Jeffrey Dill, Ph.D., *U. of Southern California*; Jeffrey Giesey, Ph.D., *U. of Michigan*; R. Dennis Irwin, Ph.D., *Mississippi State U.*; John A. Tague, Ph.D., *Penn State U.*; Frank van Graas, Ph.D., *Ohio U.*

Asst. Prof: Douglas Lawrence, Ph.D., *Johns Hopkins U.*; Joseph H. Nurre, Ph.D., *U. of Cincinnati*; Constantinos Vassiliadis, Ph.D., *Mississippi State U.*

Instr: Victor Hanna (part-time), M.S., *Youngstown State U.*

Engineering, Industrial and Systems

Prof: Charles M. Parks (chair), Ph.D., *Oklahoma State U.*; Donald Scheck (emeritus, part-time), Ph.D., *Purdue U.*; Robert Williams, Ph.D., *Ohio State U.*; Helmut Zwahlen (Russ Prof.), Ph.D., *Ohio State U.*

Assoc. Prof: E. Ralph Sims (part-time), M.B.A., *Ohio U.*

Asst. Prof: Richard J. Gerth, Ph.D., *U. of Michigan*; David A. Koonce, Ph.D., *Louisiana State U.*; Thomas A. Lacksonen, Ph.D., *Penn State U.*; Luis Rabelo, Ph.D., *U. of Missouri.*

Engineering, Mechanical

Prof: O.E. Adams, Jr. (emeritus, part-time), Ph.D., *Lehigh U.*; Khairul Alam, Ph.D., *California Institute of Technology*; Jay Gunasekera (Moss Prof., chair), Ph.D., *U. of London*; Roy Lawrence, Ph.D., *Southern Methodist U.*; T. Richard Robe (dean), Ph.D., *Stanford U.*

Assoc. Prof: Mohammad Dehghani, Ph.D., *Louisiana State U.*; Gary Graham, Ph.D., *Texas Technical U.*; Kenneth Halliday, Ph.D., *U. of Massachusetts*; Israel Urieli, Ph.D., *U. of Witwatersrand.*

Asst. Prof: Sunil Agrawal, Ph.D., *Stanford U.*; Brian C. Fabien, Ph.D., *Columbia U., New York*; Bhavin Mehta (part-time), M.S., *Ohio U.*

English

Dist. Prof: John Matthews, M.A., *Ohio State U.*

Prof: Laurence Bartlett, Ph.D., *Michigan State U.*; Frank Cronin, Ph.D., *U. of Pittsburgh*; Samuel Crowl, Ph.D., *Indiana U.*; Susan Crowl, Ph.D., *Indiana U.*; James Davis, Ph.D., *Florida State U.*; Robert DeMott, Ph.D., *Kent State U.*; Wayne Dodd, Ph.D., *U. of Oklahoma*; Raymond Fitch, Ph.D., *U. of Pennsylvania*; Roy Flannagan, Ph.D., *U. of Virginia*; John Hollow (chair), Ph.D., *U. of Rochester*; Daniel Keyes, M.A., *CUNY, Brooklyn*; Earl Knies, Ph.D., *U. of Illinois*; Julia Lin, Ph.D., *U. of Washington*; Dean McWilliams, Ph.D., *U. of Oregon*; Lester Marks, Ph.D., *Syracuse U.*; Cosmo Pieterse, M.A., *U. of Capetown*; Vance Ramsey, Ph.D., *U. of Oklahoma*; Barry Roth, Ph.D., *Stanford U.*; Duane Schneider, Ph.D., *U. of Colorado*; Eve Shelnutt, M.F.A., *U. of North Carolina, Greensboro*; Harold Swardson, Ph.D., *U. of Minnesota*; James Thompson, Ph.D., *U. of Cincinnati*; Arvin Wells, Ph.D., *U. of Michigan.*

Assoc. Prof: Marilyn Atlas, Ph.D., *Michigan State U.*; David Bergdahl, Ph.D., *Syracuse U.*; David Heaton, Ph.D., *U. of Michigan*; Janis Holm, Ph.D., *U. of Michigan*; Linda Hunt, Ph.D., *U. of California, Berkeley*; Reid Huntley, Ph.D., *U. of North Carolina, Chapel Hill*; Ernest Johansson, Ph.D., *U. of North Carolina, Chapel Hill*; Peter Kousaleos, Ph.D., *Ohio U.*; William Kuhre, Ph.D., *Penn State U.*; Ben Park, Ph.D., *U. of Oklahoma*; Betty Pytlik, Ph.D., *U. of Southern California*; Mark Rollins, Ph.D., *U. of Massachusetts, Amherst*; Arthur Woolley, Ph.D., *U. of Wisconsin, Madison*; Linda Zionkowski, Ph.D., *Northwestern U.*

Asst. Prof: Tom Andrews, M.F.A., *U. of Virginia*; Josephine Bloomfield, Ph.D., *U. of California, Davis*; Paul Dombrowski, Ph.D., *Rensselaer Polytechnic Institute*; Christine Freeman, Ph.D., *Kent State U.*; Loreen Giese, Ph.D., *Emory U.*; Mara Holt, Ph.D., *U. of Texas*; Brian Kiteley, M.A., *CCNY*; David Lazar, Ph.D., *U. of Houston*; Kristi Leatherwood, Ph.D., *Ohio U.*; Robert Miklitsch, Ph.D., *SUNY, Buffalo*; Charles Naccarato, Ph.D., *Ohio U.*; Lowell Ver Heul, Ph.D., *Ohio U.*; Valorie Worthy, Ph.D., *Ohio U.*;

Instr: David Bruce, M.A., *Ohio U.*; Jane Denbow, M.A., *Marshall U.*; Thomas Mantey, M.A., *Ohio U.*; Joan Zook, M.A., *U. of Michigan.*

Environmental and Plant Biology

Dist. Prof: Norman Cohn, Ph.D., *Yale U.*

Prof: James Braselton, Ph.D., *Iowa State U.*; James Cavender, Ph.D., *U. of Wisconsin*; Laurence Larson, Ph.D., *Purdue U.*; Robert Lloyd, Ph.D., *U. of California, Berkeley*; John Mitchell, Ph.D., *Edinburgh U.*; Gar Rothwell, Ph.D., *U. of Alberta*; Ivan Smith (chair), Ph.D., *U. of London*; Irwin Ungar, Ph.D., *U. of Kansas.*

Assoc. Prof: Philip Cantino, Ph.D., *Harvard U.*; James Herbert Graffius, Ph.D., *Michigan State U.*; Allan M. Showalter, Ph.D., *Rutgers U.*

Asst. Prof: Brian McCarthy, Ph.D., *Rutgers U.*; Arthur T. Trese, Ph.D., *U. of Missouri.*

Film

Prof: George Semsel, Ph.D., *Ohio State U.*; David O. Thomas (director), Ph.D., *Southern Illinois U.*

Assoc. Prof: Wilber R. Norman, Jr., Ph.D., *Ohio State U.*

Asst. Prof: Ruth Bradley, Ph.D., *U. of Michigan;* Jenny Kwok Wah Lau, Ph.D., *Northwestern U.*

Finance

Charles G. O'Bleness Prof. of Finance and Banking: Ganas K. Rakes (chair), D.B.A., *Washington U.*

Prof: Azmi D. Mikhail, Ph.D., *Ohio State U.*; Harlan R. Patterson, Ph.D., *Michigan State U.*

Assoc. Prof: Dwight A. Pugh, Ph.D., *Ohio U.*

Asst. Prof: Bruce S. Berlin, Ph.D., *Michigan State U.*; Jeffrey Allen Manzi, Ph.D., *Kent State U.*

Instr: John E. Reynolds III, *Executive in Residence;* Scott B. Wright, M.B.A., *Ohio U.*

Geography

Prof: Nancy R. Bain, Ph.D., *U. of Minnesota;* Frank E. Bernard, Ph.D., *U. of Wisconsin, Madison;* Bob J. Walter, Ph.D., *U. of Wisconsin, Madison;* Hubert G.H. Wilhelm, Ph.D., *Louisiana State U.*; Lynden S. Williams, Ph.D., *U. of Kansas.*

Assoc. Prof: Hubertus H.L. Bloemer (chair), Ph.D., *Union Graduate School;* James L. Cobban, Ph.D., *U. of California, Berkeley.*

Asst. Prof: Ronald H. Isaac, Ph.D., *Southern Illinois U.*; James K. Lein, Ph.D., *Kent State U.*

Instr: Michael A. Kukral, M.S., *Ohio U.*

Geological Sciences

Prof: Moid Ahmad, Ph.D., *U. of London;* F. Donald Eckelmann (dean), Ph.D., *Columbia U.;* Royal Mapes (chair), Ph.D., *U. of Iowa;* Damian Nance, Ph.D., *U. of Cambridge, England;* Geoffrey Smith, Ph.D., *Ohio State U.*; Thomas Worsley, Ph.D., *U. of Illinois.*

Assoc. Prof: Gene Heien, M.A., *Indiana U.*

Asst. Prof: Douglas Green, Ph.D., *U. of Wisconsin, Madison;* David Kidder, Ph.D., *U. of California, Santa Barbara.*

Health and Sport Sciences

Prof: Clifford Houk, Ph.D., *Montana State U.*; Gari Lesnoff-Caravaglia, Ph.D., *U. of California, Los Angeles;* James A. Lavery (director), P.E.D., *Indiana U.*

Assoc. Prof: Franklin B. Carver, Ph.D., *Ohio U.*; Tiff E. Cook, Ph.D., *Walden U.*; Marsha Gathron, Ed.D., *Oklahoma State U.*; Richard Hedges, Ph.D., *U. of Kentucky;* Charles R. Higgins, Ed.D., *U. of North Carolina, Greensboro;* John McComb (emeritus, part-time), M.Ed., *Boston U.*; Sue Ellen Miller, P.E.D., *Indiana U.*; Owen J. Wilkinson, Ph.D., *Walden U.*

Asst. Prof: Patricia Baasel, Ph.D., *Ohio U.*; Dougles Bolon, Ph.D., *Virginia Polytechnic Inst. and State U.*; Catherine Brown, Ph.D., *Ohio State U.*; Susan Bullard, Ph.D., *U. of Wisconsin;* Margaret Christensen, Ed.D., *Oklahoma State U.*; Ronald Dingle, M.S.P.E., *U. of Massachusetts;* Roger Gilders, Ph.D., *Ohio U.*; Peggy Holmes, Ph.D., *U. of Illinois;* David Jacoby, Ph.D., *Ohio U.*; Joyce King (emerita, part-time), Ph.D., *Ohio State U.*; Robin Mittelstaedt, M.S., *U. of Oregon;* Ernesto Randolfi, Ph.D., *U. of Oregon;* Lynn Simon (emerita, part-time), P.E.D., *Indiana U.*; Beth VanDerveer, Ph.D., *Texas Woman's U.*; Ronald Whitaker, M.S.Ed., *Ohio U.*; Richard Woolison, M.S.Ed., *Ohio U.*

Instr (part-time): Carol Ault, M.S., *Ohio U.*; Sue Hammond, M.S., *Ohio U.*; David Kerns, M.S., *Ohio U.*; Juli Miller, M.H.S.A., *Ohio U.*; Thomas Murray, M.A., *Ohio U.*; Sharon Noel, M.S.P.E., *Ohio U.*; William Sells, M.S.Ed., *Ohio U.*; David Stone, M.A., *U. of Northern Colorado;* Charles Vosler, M.A. Ed., *Ball State U.*; Katherine Will, M.H.S.A., *Ohio U.*

Hearing and Speech Sciences

Prof: Joann Fokes (emerita), Ph.D., *Purdue U.*; Donald Fucci, Ph.D., *Purdue U.*; Edwin Leach (director), Ph.D., *U. of Kansas.*

Assoc. Prof: Dean Christopher, Ph.D., *Ohio State U.*; Norman Garber, Ph.D., *U. of Missouri;* Ronald Isele, M.A., *Kent State U.*

Asst. Prof: Emily Buckberry, M.A., *Ohio U.*; Helen Conover, M.A., *Ohio U.*; C. Richard Dean, Ph.D., *Stanford U.*

Instr: Joan Fucci, M.S., *U. of Pittsburgh;* F. Travis Milliken, M.S., *Brigham Young U.*; William Wolfolk, M.A., *Eastern Michigan U.*

History

Ohio Eminent Research Scholar: Alfred Eckes, Ph.D., *U. of Texas.*

Dist Prof: Charles Alexander, Ph.D., *U. of Texas;* John Gaddis, Ph.D., *U. of Texas.*

Prof: Alan Booth, Ph.D., *Boston U.*; James Chastain, Ph.D., *U. of Oklahoma;* Marvin Fletcher, Ph.D., *U. of Wisconsin, Madison;* Alonzo Hamby, Ph.D., *U. of Missouri;* Donald Jordan, Ph.D., *U. of Wisconsin, Madison;* William Kaldis, Ph.D., *U. of Wisconsin, Madison;* Compton Reeves, Ph.D., *Emory U.*; Donald Richter, Ph.D., *U. of Maryland;* Bruce Steiner (chair), Ph.D., *U. of Virginia.*

Assoc. Prof: Douglas Baxter, Ph.D., *U. of Minnesota;* Phillip Bebb, Ph.D., *Ohio State U.*; Gifford Doxsee, Ph.D., *Harvard U.*; Phyllis Field, Ph.D., *Cornell U.*; William Frederick, Ph.D., *U. of Hawaii;* Michael Grow, Ph.D., *George Washington U.*; Richard Harvey, Ph.D., *U. of Missouri;* Lyle McGeoch, Ph.D., *U. of Pennsylvania;* Steven Miner, Ph.D., *Indiana U.*; Chester Pach, Ph.D., *Northwestern U.*; Roy Rauschenberg, Ph.D., *U. of Illinois;* Robert Whealey, Ph.D., *U. of Michigan.*

Asst. Prof: Katherine Jellison, Ph.D., *U. of Iowa.*

Human and Consumer Sciences

Prof: Margaret King, Ed.D., *U. of Massachusetts.*

Assoc. Prof: Judy Matthews (director), Ph.D., *Ohio State U.*; Catherine McQuaid-Steiner, Ph.D., *Ohio U.*; Prisca Nemapare, Ph.D., *U. of Tennessee;* Ernest Stricklin, Ph.D., *Boston U.*

Asst. Prof: Lee Cibrowski, Ph.D., *Ohio State U.*; Jane U. Edwards, Ph.D., *Purdue U.*; Donal R. Pierucci (part-time), M.A., *Carnegie Tech;* June Varner, Ed.D., *West Virginia U.*

Instr: Lynn Buckingham, M.S., *Ohio U.*; Schuyler Cone, M.S., *Ohio U.*; Marjorie Hagerman, M.S., *Ohio U.*; Richard Neumann, M.S., *U. of Wisconsin;* Virginia A. Paulins, Ph.D., *Ohio State U.*

Industrial Technology

Prof: Menno DiLiberto (emeritus, part-time), Ed.D., *U. of Illinois;* James Fales (chair), Ed.D., *Texas A & M;* William Reeves, Ed.D., *U. of Kentucky;* Albert Squibb (emeritus, part-time), D.Ed., *Penn State U.*

Assoc. Prof: John Deno, M. Ed., *Ohio U.*; Richard Nostrant (emeritus, part-time) M.S.Ed., *SUNY, Buffalo;* Arlen Saunders (emeritus, part-time), M.A., *Morehead State U.;* Timothy Sexton, Ph.D., *Ohio U.*

Asst. Prof: Dinesh Dhamija, M.S., *Ohio U.*; Ernest Gathron, M.S., *Southeastern Oklahoma State U.*; Peter W. Klein, M.Ed., *Colorado State U.*; Patrick J. McCuistion, Ph.D., *Texas A & M.*

Interpersonal Communication

Prof: Tom Daniels, Ph.D., *Ohio U.*; Sue DeWine (director), Ph.D., *Indiana U.*; Paul Nelson (dean), Ph.D., *U. of Minnesota;* Judy C. Pearson, Ph.D., *Indiana U.*; John Timmis III (emeritus, part-time), Ph.D., *Penn State U.*

Assoc. Prof: Dan Canary, Ph.D., *U. of Southern California;* Charles Carlson (emeritus, part-time), M.Ed., *Kent State U.*; David Descutner, Ph.D., *U. of Illinois;* Ted Foster, Ph.D., *Ohio U.*; Elizabeth Graham, Ph.D., *Kent State U.*; Maung Gyi, Ph.D., *Ohio U.*; Claudia Hale, Ph.D., *U. of Illinois;* Anita James, Ph.D., *U. of Southern California;* Michael Papa, Ph.D., *Temple U.*; Ray Wagner, Ph.D., *Ohio U.*

Asst. Prof: Roger Aden, Ph.D., *U. of Nebraska;* Christine Beck, Ph.D., *U. of Oklahoma;* Judith Yaross Lee, Ph.D., *U. of Chicago;* Arvind Singhal, Ph.D., *U. of Southern California;* John Smith, Ph.D., *Wayne State U.*

Instr: Cedric Dawkins, M.A., *Ohio U.*; Wendy Papa, M.A., *Central Michigan U.*

Lect: Margaret Killough, J.D., *U. of Detroit.*

Journalism

Dist. Prof: Guido Stempel III, Ph.D., *U. of Wisconsin.*

Prof: Russell Baird (emeritus, part-time), M.A., *U. of Wisconsin;* Michael Bugeja, Ph.D., *Oklahoma State U.*; Hugh Culbertson, Ph.D., *Michigan State U.*; Dru Riley Evarts, Ph.D., *Ohio U.*; Melvin Helitzer, B.A., *Syracuse U.*; Ralph Izard (director), Ph.D., *U. of Illinois;* Ralph Kliesch (emeritus, part-time), Ph.D., *U. of Minnesota;* Donald Lambert, M.A., *Penn State U.*; Charles L. Scott, M.S.J., *Ohio U.*; Jerry Sloan, B.S., *Ohio U.*; Patrick Washburn, Ph.D., *Indiana U.*

Assoc. Prof: Anne M. Cooper, Ph.D., *U. of North Carolina;* Marilyn Greenwald, M.A., *Ohio State U.*; Sandra Haggerty, B.S., *Utah State U.*; Thomas Hodges, M.S., *South Dakota State U.*; Thomas Peters, M.B.A., *Ohio U.*; Robert J. Richardson (part-time), M.S., *Ohio U.*; Robert Stewart, M.A., *U. of Washington;* Patricia Westfall, M.S., *Columbia U.*

Asst. Prof: Joe Bernt, Ph.D., *U. of Nebraska;* Eddith Dashiell, M.A., *Middle Tennessee State U.*; Ron Pittman, M.S., *Marshall U.*; Cassandra Reese, M.B.A., *Governors State U.*; Frazier Smith, B.A., *Indiana U.*

Instr (part-time): Herbert Amey, B.S.J., *Ohio U.*; Ray Frye, B.S.J., *Ohio U.*; Carol James, B.S.J., *Ohio U.*; Karl Runser, B.A., *Ohio U.*

Asst. Instr: Richard Bean.

Linguistics

Prof: Zinny Bond, Ph.D., *Ohio State U.*

Assoc. Prof: James Coady, Ph.D., *Indiana U.*; Richard McGinn, Ph.D., *U. of Hawaii;* Keiko Koda, Ph.D., *U. of Illinois;* Marmo Soemarmo, Ph.D., *U. of California, Los Angeles.*

Asst. Prof: Neil J. Anderson, Ph.D., *U. of Texas;* Beverly Flanigan, Ph.D., *Indiana U.*

Instr: Joe Amoako, Ph.D., *U. of Florida;* Lutfi Hussein, M.A., *Ohio State U.*; Miki Shibata, M.A., *Ohio U.*; Suhami Soemarmo, M.A., *U. of California, Los Angeles;* Miki Ueda, M.A., *Ohio U.*; Mei-Hua Zhai, Ph.D., *Ohio U.*

Management Information Systems

Prof: Thomas G. Luce, Ph.D., *Purdue U.*; Anne H. McClanahan, Ph.D., *Ohio U.*; James Perotti, Ph.D., *Duquesne U.*

Assoc. Prof: John Day, Ph.D., *Ohio U.*; David Sutherland, Ph.D., *U. of Kansas.*

Asst. Prof: Ellsworth Holden (chair), M.A., *Harvard U.*

Lect: Corrine Brown (part-time), Ph.D., *Ohio U.*

Management Systems

O'Bleness Prof: John R. Schermerhorn, Jr., Ph.D., *Northwestern U. Grad School of Mgt.*

Lecturer and Executive-in-Residence: Richard C. Scamehorn, M.B.A., *Indiana U.*

Prof: Stephen H. Fuller, D.B.A., *Harvard Graduate School of Business Administration;* Manjulika Koshal, Ph.D., *Patna U.*; Arthur Marinelli (chair), J.D., *Ohio State U.*; S. Benjamin Prasad (emeritus, part-time), Ph.D., *U. of Wisconsin, Madison*; Lucian Spataro, Ph.D., *U. of Illinois;* John Stinson, Ph.D., *Ohio State U.*; Lane Tracy, D.B.A., *U. of Washington;* Harvey Tschirgi, Ph.D., *U. of California, Los Angeles.*

Assoc. Prof: Frank Barone, Ph.D., *Ohio State U.*; Thomas Bolland, Ph.D., *U. of Chicago*; Gerald F. Carvalho, Ph.D., *U. of Michigan*; William Day, D.B.A., *Harvard U.*; Frances M. Fuller, A.M., *Columbia U.*; Mary Keifer, J.D., *U. of Virginia*; Clarence Martin, Ph.D., *Carnegie Mellon U.*; Richard Milter, Ph.D., *SUNY, Albany;* Valerie Perotti, Ph.D., *Ohio U.*; Bonnie Roach, Ph.D., *Ohio State U.*; Alice Rutkoskie (emerita, part-time), M.S., *Indiana U.*; Edward B. Yost, Ph.D., *Ohio State U.*

Asst. Prof: Carl Bridges, Ed.D., *Northern Illinois U.*; Garth Coombs, M.B.A., *U. of Denver*; Kenneth Cutright, Ph.D., *West Virginia U.*; Patricia Gunn, J.D., *Boston College*; Jessie Roberson, J.D., *U. of Michigan.*

Instr: Virginia Woolley (part-time), M.A., *U. of Wisconsin, Madison.*

Lect (part-time): Pamela A. Boger, Ph.D., *Ohio U.*; C. Michael Gray, J.D., *U. of Wisconsin*; Peggy Miller, Ph.D., *Ohio U.*; Reid Sinclair, Ph.D., *Vanderbilt U.*

Marketing

Prof: Ashok Gupta (chair), Ph.D., *Syracuse U.*; Kahandas Nandola, Ph.D., *U. of Pennsylvania.*

Assoc. Prof: Timothy P. Hartman, Ph.D., *Ohio U.*

Asst. Prof: Catherine N. Axinn, Ph.D., *Michigan State U.*; Mary Elizabeth Blair, Ph.D., *U. of South Carolina;* Daniel E. Innis, Ph.D., *Ohio State U.*

Instr: Larry S. Rogers, M.B.A., *Ohio U.*

Mathemathics

Prof: Abdol-Reza Aftabizadeh, Ph.D., *U. of Texas, Arlington*; Sergiu Aizicovici, Ph.D., *U. of Iasi*; Alexander V. Arhangelskii, Dr. Sc., *VAC, USSR*; Robert Atalla, Ph.D., *U. of Rochester*; Ralph deLaubenfels, Ph.D., *U. of California, Berkeley;* Surender Jain, Ph.D., *U. of Delhi*; Donald Norris, Ph.D., *Ohio State U.*; Nicolae Pavel, Ph.D., *U. of Iasi*; Hari Shankar, M.A., *U. of Cincinnati*; Larry Snyder, Ph.D., *Purdue U.*; Shih-Liang Wen, Ph.D., *Purdue U.*; Howard Wicke, Ph.D., *U. of Iowa*; Thomas Wolf, Ph.D., *U. of Wisconsin, Madison.*

Assoc. Prof: Jeffery Connor, Ph.D., *Kent State U.*; Ellery Golos (emeritus, part-time), M.A., *U. of Michigan*; Eliot Jacobson, Ph.D., *U. of Arizona*; David Keck, Ph.D., *Ohio State U.*; Sergio Lopez-Permouth, Ph.D., *North Carolina State U.*; Paul S. Malcom, Ph.D., *Ohio State U.*; Cyrus Mehr (emeritus, part-time), Ph.D., *Purdue U.*; M.S.K. Sastry, Ph.D., *U. of Rochester*; James Shirey, Ph.D., *Purdue U.*; Mary Anne Swardson (chair), Ph.D., *Ohio U.*; Robert Vancko, Ph.D., *Penn State U.*

Asst. Prof: Walter Carlip, Ph.D., *U. of Chicago*; Steven A. Chapin, Ph.D., *Rutgers U.*; Winfried Just, Ph.D., *U. of Warsaw*; William E. Kaufman, Ph.D., *U. of Houston:* Paul J. Szeptycki, Ph.D., *U. of Toronto;* Quoc Phong Vu, Dr. Sc., *VAC, USSR.*

Military Science

Prof: Carl J. Kreiser (chair), M.B.A., *Central Michigan U.*

Asst. Prof: James R. Oliver, M.B.A., *Mississippi State U.*; Terrence J. Smith, M.A., *Webster U.*; Paul A. Stock, M.B.A., *Oklahoma City U.*

Modern Languages

Prof: Richard Danner, Ph.D., *Indiana U.*; Thomas Franz, Ph.D., *U. of Kansas*; Manuel Serna-Maytorena, Ph.D., *U. of Missouri*; Barry Thomas, Ph.D., *U. of California, Berkeley*; Lois Vines, Ph.D., *Georgetown U.*; Maureen Weissenrieder (chair), Ph.D., *Penn State U.*; William Wrage, Ph.D., *U. of Wisconsin, Madison.*

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Asst. Prof: Eloise Boyle, Ph.D., *Ohio State U.*; Grafton Conliffe, Ph.D., *Northwestern U.*; Mary Jane Kelley, Ph.D., *U. of Wisconsin, Madison*; Betsy Partyka, Ph.D., *U. of Oxford;* Ann Salomone, Ph.D., *Ohio State U.*; Frances Sweeney, Ph.D., *U. of Texas;* Harriet Tong, Ph.D., *Ohio U.*; Daniel Torres, Ph.D., *U. of Cincinnati.*

Lect: Douglas Hinkle, M.A., *U. of Virginia*; Bartolomeo Martello, M.A., *Michigan State U.*.

Instr: Waltraud Bald, M.A., *U. of Michigan*; Joseph Burns, M.A., *U. of Tennessee*; José Delgado, M.A., *Indiana U.*; David Mayberry, M.A., *U. of California, Berkeley;* Denice Montesano, M.A., *SUNY, Buffalo;* Anne Porter, M.A., *Middlebury College;* Barbara Reichenbach, M.A., *Kent State U.*; Josefina Williams, M.A., *Ohio U.*; Karin Wright, M.A., *Ohio U.*

Music

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Assoc. Prof: H. Joseph Butler, D.M.A., *Eastman School of Music*; Peggy A. Codding, Ph.D., *Florida State U.*; Bert L. Damron, Ph.D., *Florida State U.*; Peter Jarjisian, D.M.A., *U. of Wisconsin, Madison;* Mark Phillips, D.M., *Indiana U.*; Allyn Reilly, Ph.D., *Northwestern U.*; James Stewart, Ph.D., *Ohio State U.*; Margene Stewart, M.F.A., *Ohio U.*; Sylvester Young, M.M., *Bowling Green State U.*; Ira Zook, D.M.A., *U. of Michigan.*

Asst. Prof: Nancy Beebe, M.M., *Ohio U.*; Milton Butler, M.M., *Texas Southern U.*; Donna Conaty, M.M., *Yale School of Music*; Pauline Gagliano, M.S., *U. of Illinois*; Trygve Peterson, M.M., *Yale School of Music*; Robert Newell, D.M.A., *U. of Illinois.*

Nursing

Prof: Barbara K. Chapman (dean), Ph.D., *Ohio State U.*; Kathleen Rose-Grippa (director), Ph.D., *Stanford U.*

Asst. Prof: Maxine Cerra, Ph.D., *Ohio U.*; Sharon Denham, M.S.N., *Bellarmine;* Emily Harman, M.S.N., *West Virginia U.*; Sharon Mullen, Ph.D., *Ohio U.*; Carla Phillips, Ph.D., *Ohio State U.*; Martha Rock, Ph.D., *U. of Delaware;* Kathleen Tennant, M.S.N., *West Virginia U.*

Ohio Program of Intensive English

Lect: John Bagnole, M.A., *Georgetown U.*; Brenda Bates, M.A., *Georgia State U.*; Stephen Briss, M.A., *Ohio State U.*; Marisa Brooks, M.A., *School for International Training;* Barry Emberlin, M.A., *SUNY, Albany*; Linn Forhan, M.A., *Ohio U.*; Cynthia Holliday, M.A., *SUNY, Albany*; David Hopkins, M.A., *School for International Training*; Jack Humbles, M.A., *Ball State U.*; Helen Huntley, M.A., *West Virginia U.*; Mary Kaye Jordan, M.A., *Ohio U.*; Gerald Krzic, M.A., *Ohio U.*; John McVicker, M.A., *Kansas U.*; Charles Mickelson, M.A., *Ohio U.*; John W. Miller, M.A., *School for International Training*; Patrick Miller, M.A., *Ohio U.*; Cornelia Perdreau, M.A., *Ohio U.*; Scott Schiefelbein, M.A., *U. of Kansas.*

College of Osteopathic Medicine

BASIC SCIENCES

Prof: Jack Blazyk, Ph.D., *Brown U.*; Joseph T. Eastman, Ph.D., *U. of Minnesota*; Robert S. Hikida, Ph.D., *U. of Illinois*; Peter Johnson, Ph.D., *U. of Birmingham*; Joseph Jollick, Ph.D., *West Virginia U.*; Ellengene Peterson, Ph.D., *U. of California, Riverside*; Michael Rowe, Ph.D., *U. of California, Riverside.*

Assoc. Prof: Huzoor Akbar, Ph.D., *Australian National U.*; Mary Chamberlin, Ph.D., *U. of British Columbia*; Robert Colvin, Ph.D., *Rutgers U.*; Walter Costello, Ph.D., *Boston U.*; Ralph A. DiCaprio, Ph.D., *U. of Alberta*; Kenneth Goodrum, Ph.D., *U. of Texas*; Oscar Heck, Ph.D., *Washington State U.*; William Henley, Ph.D., *Colorado State U.*; John Howell, Ph.D., *U. of California, Los Angeles*; Louise Luckenbill, Ph.D., *Brown U.*; Malcolm C. Modrzakowski, Ph.D., *U. of Georgia*; Scott M. Moody, Ph.D., *U. of Michigan*; Finnie Murray, Ph.D., *U. of Florida*; Ronald Portanova, Ph.D., *Case Western Reserve U.*; Edwin C. Rowland, Ph.D., *Wake Forest U.*; Robert S. Staron, Ph.D., *Ohio U.*; Leon C. Wince, Ph.D., *West Virginia U.*; John M. Zook, Ph.D., *Duke U.*

Asst. Prof: Bonita Biegalke, Ph.D., *U. of Washington;* Audrone Biknevicius, Ph.D., *Johns Hopkins U.*; Anthony Brown, Ph.D., *King's College;* William Holmes, Ph.D., *U. of California, Los Angeles*; Scott Hooper, Ph.D., *Brandeis U.;* Calvin B.L. James, Ph.D., *Howard U.*; Nobuyuki Kuwabara, Ph.D., *Sophia U.;* Anne B. Loucks, Ph.D., *U. of California, Santa Barbara*; Brent Palmer, Ph.D., *U. of Florida.*

Instr: Mary K. Eastman, M.S., *Ohio U.*; Andrew C. Fry, Ph.D., *Penn State U.*

DEPARTMENT OF FAMILY MEDICINE

Prof: John A. Brose, D.O., *Texas College of Osteopathic Medicine*; Anthony G. Chila, D.O., *Kansas City College of Osteopathic Medicine*; Frank W. Myers, D.O., *College of Osteopathic Medicine and Surgery,* *Des Moines*; David A. Patriquin (emeritus, part-time), D.O., *Philadelphia College of Osteopathic Medicine*; Judith W. Rhue, Ph.D., *Ohio U.*; Barbara Ross-Lee (dean), D.O., *Michigan State U.*

Assoc. Prof: David E. Brown, D.O., *Kansas City College of Osteopathic Medicine*; Peter B. Dane, D.O., *Michigan State U. College of Osteopathic Medicine*; William F. Duerfeldt (chair), D.O., *Kirksville College of Osteopathic Medicine*; Timothy J. Hogan, D.O., *University of New England, College of Osteopathic Medicine;* Donna M. Mabry (part-time), Ph.D., *Ohio U.*; Daniel J. Marazon, D.O., *Kirksville College of Osteopathic Medicine*; Marjorie E. Nelson, M.D., *Indiana U. School of Medicine*; Lenard G. Presutti, D.O., *College of Osteopathic Medicine and Surgery, Des Moines*; Daniel J. Raub, D.O., *Philadelphia College of Osteopathic Medicine*; Gerald Rubin, D.O., *Philadelphia College of Osteopathic Medicine*; Anthony J. Tenoglia (part-time), D.O., *Kansas City College of Osteopathic Medicine*; Thomas A. Thesing, D.O., *College of Osteopathic Medicine and Surgery, Des Moines*; Richard W. Willy, D.O., *Kirksville College of Osteopathic Medicine*; John C. Wolf, D.O., *Kirksville College of Osteopathic Medicine.*

Asst. Prof: Wayne R. Carlsen, D.O., *University of Medicine and Dentistry of New Jersey, School of Osteopathic Medicine;* John C. Glover, D.O., *West Virginia School of Osteopathic Medicine*; Karl E. Harnish, D.O., *Chicago College of Osteopathic Medicine*; Edward W. Schreck, D.O., *Chicago College of Osteopathic Medicine*; David N. Stroh, D.O., *Ohio U. College of Osteopathic Medicine*; Harold C. Thompson III, D.O., *Chicago College of Osteopathic Medicine*; Linda B. Tomc (part-time), D.O., *Ohio U. College of Osteopathic Medicine;* Jeffrey W. Ziegler, D.O., *University of Medicine and Dentistry of New Jersey, School of Osteopathic Medicine.*

DEPARTMENT OF SPECIALTY MEDICINE

Prof: Jerome L. Axelrod, D.O., *Philadelphia College of Osteopathic Medicine*; J. Phillip Jones, D.O., *Kansas City College of Osteopathic Medicine*; Phillip D. Kinnard (part-time), M.D., *U. of Cincinnati College of Medicine*; Harvey C. Orth, Jr., D.O., *Kirksville College of Osteopathic Medicine*; Michael Patterson, Ph.D., *U. of Iowa*; Frederick W. Rente, D.O., *Philadelphia College of Osteopathic Medicine.*

Assoc. Prof: Norman F. Baker, D.O., *Philadelphia College of Osteopathic Medicine*; Paul E. Cadamagnani, D.O., *Chicago College of Osteopathic Medicine*; Steven G. Carin, D.O., *Philadelphia College of Osteopathic Medicine*; William H. Carlson, D.O., *Kirksville College of Osteopathic Medicine*; C. Thomas Clark (acting chair), D.O., *College of Osteopathic Medicine and Surgery, Des Moines*; Richard H. Feeck, D.O., *Philadelphia College of Osteopathic Medicine*; James E. Foglesong, D.O., *Kirksville College of Osteopathic Medicine*; John S. Molea, D.O., *College of Osteopathic Medicine and Surgery, Des Moines*; W. Randolph Purdy, D.O., *Kirksville College of Osteopathic Medicine;* Michele K. Rivers, M.D., *Wayne State University School of Medicine.*

Asst. Prof: James Boes, D.O., *Chicago College of Osteopathic Medicine*; Gary Cordingley (part-time), M.D., *Duke U.*; Scott A. Jenkinson, D.O., *Ohio U. College of Osteopathic Medicine;* Robert Moore, D.O., *Kansas City College of Osteopathic Medicine*; Kendall Stewart (part-time), M.D., *Medical College of Georgia;* Michael Tomc, D.O., *Ohio U. College of Osteopathic Medicine.*

Philosophy

Prof: Gene Blocker, Ph.D., *U. of California, Berkeley*; Donald Borchert (chair), Ph.D., *Princeton Theological Seminary*; Algis Mickunas, Ph.D., *Emory U.*; Albert Mosley, Ph.D., *U. of Wisconsin*; Charles Ping (president), Ph.D., *Duke U.*; Warren Ruchti, Ph.D., *U. of Pennsylvania*; David Stewart (provost), Ph.D., *Rice U.*; Robert Weiman (emeritus, part-time), Ph.D., *U. of California, Berkeley.*

Assoc. Prof: John Bender, Ph.D., *Harvard U.*; Philip Ehrlich, Ph.D., *U. of Illinois;* Cynthia Hampton, Ph.D., *Northwestern U.*; Elizabeth Smith, Ph.D., *U. of Washington*; Robert Trevas, Ph.D., *U. of Maryland*; George Weckman, Ph.D., *U. of Chicago*; Arthur Zucker, Ph.D., *U. of Minnesota.*

Asst. Prof: Elizabeth Collins, Ph.D., *U. of California, Berkeley;* James Petrik, Ph.D., *Marquette U.*

Instr: Gregory Emery, Ph.D., *Temple U.*

Physical Therapy

Assoc. Prof: Cynthia C. Norkin (director), Ed.D., *Boston U.*

Asst. Prof: Dennis Cade, M.S.P.T., *Boston U.*; Gary S. Chleboun, M.S., *Duke U.*; Rosalind S. Hickenbottom, Ph.D., *Emory U.*; Clyde Killian, M.S., *Indiana U.*; Marleen I. McClelland, Ph.D., *Ohio State U.*

Physics and Astronomy

Dist. Prof: Roger Finlay, Ph.D., *Johns Hopkins U.*; Raymond Lane, Ph.D., *Iowa State U.*; Jacobo Rapaport, Ph.D., *Massachusetts Institute of Technology.*

Prof: Ernst Breitenberger, Dr. phil., *U. of Vienna*, Ph.D., *U. of Cambridge;* Ronald Cappelletti, Ph.D., *U. of Illinois*; Charles Chen, Ph.D., *U. of Maryland*; James Dilley, Ph.D., *Syracuse U.*; Steven M. Grimes, Ph.D., *U. of Wisconsin, Madison*; Earle Hunt, Ph.D., *Rutgers U.*; David Onley, D. Phil., *Oxford U.*; Roger Rollins, Ph.D., *Cornell U.*; Edward Sanford, Ph.D., *Iowa State U.*; Folden Stumpf, Ph.D., *Illinois Inst. of Tech.*; Louis Wright (chair), Ph.D., *Duke U.*; Seung Yun, Ph.D., *Brown U.*

Assoc. Prof: Charles Brient, Ph.D., *U. of Texas, Austin*; Kenneth Hicks, Ph.D., *U. of Colorado*; Darrell Huwe, Ph.D., *U. of California, Berkeley*; David Ingram, Ph.D., *Salford U.*; Martin Kordesch, Ph.D., *Case Western Reserve U*; Sergio Ulloa, Ph.D., *SUNY, Buffalo.*

Asst. Prof: Clyde Baker, M.S., *Ohio U.*; David Drabold, Ph.D., *Washington U*; Charlotte Elster, Dr. rer. natl., *U. of Bonn.*

Political Science

Prof: Richard H. Bald, Ph.D., *U. of Michigan;* James F. Barnes, Ph.D., *Ohio State U.*; Edward Baum, Ph.D., *U. of California, Los Angeles*; David D. Dabelko, Ph.D., *U. of Illinois*; Felix V. Gagliano, Ph.D., *U. of Illinois*; Harold Molineu, Ph.D., *American U.*; Patricia Bayer Richard, Ph.D., *Syracuse U.*; Joseph B. Tucker, Ph.D., *U. of Illinois*; Thomas W. Walker, Ph.D., *U. of New Mexico*; Mark L. Weinberg, Ph.D., *U. of North Carolina.*

Assoc. Prof: Delysa Burnier, Ph.D., *U. of Illinois*; Gary Hawes, Ph.D., *U. of Hawaii*; J. Franklin Henderson, Ph.D., *U. of Missouri*; Ronald J. Hunt, Ph.D., *Ohio State U.*; Sung Ho Kim, Ph.D., *Columbia U.*; Michael J. Mumper, Ph.D., *U. of Maryland*; Alexander V. Prisley, Ph.D., *Brown U.*; David L. Williams (chair), Ph.D., *Columbia U.*

Asst. Prof: John R. Gilliom, Ph.D., *U. of Washington;* Joy Huntley, Ph.D., *Duke U.*; Kathryn M. Lambert, Ph.D., *Temple U.*; Nancy J. Manring, Ph.D., *U. of Michigan;* Lewis A. Randolph, Ph.D., *Ohio State U.*; Takaaki Suzuki, Ph.D., *Columbia U.*

Psychology

Prof: Margret Appel, Ph.D., *U. of Denver*; Jack Arbuthnot, Ph.D., *Cornell U.*; Hal Arkes, Ph.D., *U. of Michigan*; Francis Bellezza, Ph.D., *U. of Minnesota*; James Bruning (emeritus, part-time), Ph.D., *U. of Iowa*; Thomas Creer, Ph.D., *Florida State U.*; Jean Drevenstedt, Ph.D., *Vanderbilt U.*; John Garske, Ph.D., *U. of California, Berkeley*; Donald Gordon, Ph.D., *U. of Alabama*; Kenneth Holroyd, Ph.D., *U. of Miami*; Harry Kotses, Ph.D., *Michigan State U.*; Paul Lewis, Ph.D., *Bowling Green State U.*; Steven Lynn, Ph.D., *Indiana U.*; John McNamara, Ph.D., *U. of Georgia*; Gary Schumacher (chair), Ph.D., *Iowa State U.*; Lawrence Waters, Ph.D., *Ohio State U.*

Assoc. Prof: Mark Alicke, Ph.D., *North Carolina U.*; Linda Bellush, Ph.D., *U. of Florida*; Bruce Carlson, Ph.D., *U. of Michigan;* David Johnson, Ph.D., *Ohio State U.*; G. Daniel Lassiter, Ph.D., *U. of Virginia*; Jerome Maurath (part-time), Ph.D., *U. of Illinois*; Danny Moates, Ph.D., *Vanderbilt U.*; Paula Popovich, Ph.D., *Michigan State U.*

Asst. Prof: Peter Chen, Ph.D., *U. of South Florida;* Christopher France, Ph.D., *McGill U.*; Christine Gidycz, Ph.D., *Kent State U.*; Paul Gleason (part-time), Ph.D., *Penn State U.*; Jeanne Heaton (part-time), Ph.D., *Ohio U.*; Benjamin Ogles, Ph.D., *Brigham Young U.*; Gary Sarver, Ph.D., *U. of Florida.*

Instr: James Short (part-time), M.A., *Ohio U.*

Social Work

Assoc. Prof: Miriam Clubok, M.S.W., *Wayne State U.*; Thomas Oellerich (chair), Ph.D., *Case Western Reserve U.*

Asst. Prof: Richard W. Greenlee, Ph.D., *Ohio State U.*; Carolyn Tice, D.S.W., *U. of Pennsylvania.*

Sociology and Anthropology

Prof: Rodney Elliott (emeritus, part-time), Ph.D., *U. of Colorado*; Tibor Koertvelyessy, Ph.D., *SUNY, Buffalo*; Lena Wright Myers, Ph.D., *Michigan State U.*; Arthur Saxe (part-time), Ph.D., *U. of Michigan*; Robert Shelly, Ph.D., *Michigan State U.*; Alex Thio, Ph.D., *SUNY, Buffalo*; Eric Wagner, Ph.D., *U. of Florida.*

Assoc. Prof: Elliot Abrams, Ph.D., *Penn State U.*; E. Leon Anderson, Ph.D., *U. of Texas, Austin*; William Burkhardt (emeritus, part-time), Ph.D., *Wayne State U.*; Bruce Ergood, Ph.D., *U. of Florida*; Girard Krebs, Ph.D., *Cornell U.*; Bruce Kuhre (part-time), Ph.D., *Penn State U.*; Martin Schwartz (chair), Ph.D., *U. of Kentucky*; Don Shamblin, Ph.D., *SUNY, Buffalo*; Robert Sheak, Ph.D., *Washington U.*

Asst. Prof: Thomas Calhoun, Ph.D., *U. of Kentucky*; Diane M. Ciekawy, Ph.D., *Columbia U.*; AnnCorinne Freter-Abrams (part-time), Ph.D., *Penn State U.*; V. Aileen Hall (part-time), Ph.D., *Kent State U.*; Mary Beth Krouse, Ph.D., *Ohio State U.*; Christine Mattley, Ph.D., *Washington State U.*; Emanuel (Mike) Polioudakis, Ph.D., *U. of Michigan.*

Telecommunications

Prof: Don Flournoy, Ph.D., *U. of Texas*; Drew McDaniel, Ph.D., *Ohio U.*; William Miller, Ph.D., *U. of Southern California*; Josep Rota, Ph.D., *Michigan State U.*; Joseph Slade (director), Ph.D., *New York U.*

Assoc. Prof: Charles Clift III, Ph.D., *Indiana U.*; George Korn, M.A., *Southern Illinois U.*; David Mould, Ph.D., *Ohio U.*; Jenny Nelson, Ph.D., *Southern Illinois U.*; Karin Sandell, Ph.D., *U. of Iowa;* Arthur Savage, Ph.D., *Michigan State U.*

Asst. Prof: Vibert Cambridge, Ph.D., *Ohio U.*; Sheva Farkas, Ph.D., *Ohio State U.*; Roger Good, M.A., *Ohio U.*; Jeff Redefer, B.S.C., *Ohio U.*; Joseph Richie, M.M.A., *U. of South Carolina.*

Instr: Sheila Wurtsbaugh, M.A., *Ohio U.*

Theater

Prof: Seabury Quinn, Jr., Ph.D., *Yale U.*; George Sherman, M.F.A., *Yale U.*; Robert L. Winters, M.A., *Michigan State U.*

Assoc. Prof: Ursula Belden, M.A., *U. of Michigan*; Holly Cole, M.F.A., *Carnegie Mellon U.*; William F. Condee, Ph.D., *Columbia U.*; Dennis Dalen, M.A., *U. of Kansas*; Toni Dorfman (director), M.F.A., *Columbia U.*; William Fisher, B.A., *Indiana U.*; L.S. Fraze, M.A., *Penn State U.*; Denise Gabriel, M.A., *Ohio State U.*; Henson Keys, M.F.A., *Florida State U.*; Robert St. Lawrence, M.A., *U. of Pittsburgh.*

Asst. Prof: Kathy E. Devecka, M.A., *U. of Michigan*; Laura Parrotti, M.A., *SUNY, Binghamton.*

Visual Communication

Prof: Terrill Eiler, M.F.A., *Ohio U.*; Charles Scott (director), M.S.J., *Ohio U.*

Assoc. Prof: Edward E. Pieratt, M.A., *Ohio U.*

Asst. Prof: Christopher L. Carr, M.A., *Ohio U.*; Gary Kirksey, M.A., *Ohio U.*

Chillicothe Campus

Prof: Veena Kasbekar (English), Ph.D., *U. of Cincinnati*; Ronald Salomone (English), Ph.D., *Indiana U.*; Arthur Vorhies (biology/zoology), Ph.D., *Ohio U.*

Assoc. Prof: Andrew J. Batchelor (business management technology), M.B.A. *Fairleigh Dickinson U.*; Bobby Christian (physical education), M.Ed., *Ohio U.*; Dennis Deane (art/photography), M.F.A., *U. of North Carolina, Chapel Hill*; David H. Gigley (office administration technology), M.Ed., *U. of Cincinnati*; David O. Harding (law enforcement technology), M.S., *Eastern Kentucky U.*; Glenn R. Mackin (political science), M.A., *Ohio U.*; Howard O. Miller (physical education), M.Ed., *Xavier U.*; John F. Reiger (history), Ph.D., *Northwestern U.*; Hamid Shahrestani (economics), Ph.D., *U. of Cincinnati*; Arun C. Venkatachar (physics), Ph.D., *Northern Texas State U.*; Richard A. Whinery (human services technology), Ph.D., *U. of Akron*; Monica Wyzalek (mathematics), M.S., *U. of Illinois.*

Asst. Prof: Gary Elkin (law enforcement technology), M.S., *Eastern Kentucky U.*; Ronald S. Elliott (computer science), M.S., *Ohio U.*; Richard Kowieski (interpersonal communication), Ph.D., *Ohio U.*; Margaret McAdams (art), M.F.A., *Washington U.*; Leonard Powlick (English), Ph.D., *U. of Pittsburgh*; Ann Salomone (French), Ph.D., *Ohio State U.*; Richard Sandy (mathematics), M.S., *Michigan State U.*; Jan Schmittauer (English), Ph.D., *Ohio State U.*; Ruth Zajdel (office administration technology), M.Ed., *U. of Cincinnati.*

Instr: Janet Duvall (human services technology), A.A.S., *Ohio U.*; Cindy Matyi (psychology), Ph.D., *Ohio U.*; Roger Smith (chemistry), M.S., *Ohio State U.*; John Sullivan (art), M.Hum., *Wright State U.*

Lect: John Irwin (business management technology), M.B.A., *Ohio State U.*; James R. Reed (MIS/computer science), M.B.A., *U. of Dayton.*

Eastern Campus (St. Clairsville)

Assoc. Prof: John Bisbocci (chemistry; emeritus, part-time), M.A., *Bowling Green State U.*; Lawrence Bush (mathematics), M.S., *Ohio U.*; Claude Colvin (English; emeritus, part-time), M.A., *Kent State U.*; Thomas P. Flynn (English), Ph.D., *Ohio U.*; Adam Giandomenico (hearing and speech sciences; emeritus, part-time), Ph.D., *Case Western Reserve U.*; Thomas Helms (education; emeritus, part-time), Ph.D., *Ohio U.*; James W. Newton (geography and urban planning), Ph.D., *U. of North Carolina.*

Asst. Prof: Eldred Bovenizer (education; emeritus, part-time), Ph.D., *Ohio U.*; Joseph Hudak (health and sport sciences), Ph.D., *U. of Toledo*; Muhammed Faizul Islam (economics), Ph.D., *Northern U.*; Kay Mansuetto (botany), M.S., *U. of South Carolina*; Richard McMann (sociology), M.A., *Wayne State U.*; Michael McTeague (history), M.A., *Ohio U.*; David Miles (comparative arts), M.A., *Northeast Missouri State College*; Gary Neff (mathematics), M.S., *Ohio U.*; David Noble (English), D.A., *Carnegie Mellon U.*; Victor Rutter (history; emeritus, part-time), M.A., *Ohio U.*; Thomas Stubbs (mathematics; emeritus, part-time), M.A., *West Virginia U.*; Samuel Weaver (history), Ph.D., *American U.*; Henry Winkler (psychology), Ph.D., *Ohio U.*; Howard Wisch (philosophy), M.A., *CUNY*; Charles Withrow (zoology), Ph.D., *Ohio State U.*; Kuruvilla Zachariah (chemistry), Ph.D., *Oklahoma State U.*

Instr: David Brooks (geography; part-time), Ed.D., *West Virginia U.*; Thomas Doepken, (art; part-time), M.F.A., *Ohio U.*; Dennis Fox (theater; part-time), M.A., *Ohio State U.*; Daniel Frizzi, Jr.(business law), J.D., *Ohio Northern U.*; Michael Kaiser (counselor education; part-time), M.Ed., *Ohio U.*; Eileen McCormick, (communication; part-time), M.A., *U. of Pittsburgh*; Lucien Murzyn (health and sport sciences; part-time), M.Ed., *U. of New Orleans*; Carolyn Rutter (study skills and reading; part-time), M.Ed., *Ohio U.*; Daniel Stern (sociology; part-time), M.A., *U. of Pittsburgh*; Kathleen Van Voorst (computer science), M.S., *Northwest Missouri State*, Patrick Wood (English; part-time), M.A., *West Virginia U.*

Lancaster Campus

Prof: Carol Christy (political science), Ph.D., *Ohio State U*; Gene Stoppenhagen (physics), Ph.D., *Ohio U.*

Assoc. Prof: Larry Ault (economics), M.A., *Ohio U.*; Gary Baldwin (mathematics), M.S., *U. of Illinois*; Sonny Baxter (geology), Ph.D., *Ohio State U.*; Jan Cox (mathematics), M.A., *Western Michigan U.*; Peter Desy (English), Ph.D., *Kent State U.*; Shun Endo (art), M.F.A., *Temple U.*; Karen Evans (interpersonal communication), Ph.D., *Southern Illinois U.*; Edward Fitzgibbon (history), Ph.D., *Ohio State U.*; Fred Herr (accounting), M.S., *Kent State U.*; Frederick Kalister (English), Ph.D., *Ohio U.*; Larry Kerr (psychology), Ph.D., *U. of California, Los Angeles*; Dennis Lupher (economics), Ph.D., *Ohio U.*; Polly Lyons (physical education), M.Ed., *Ohio U.*; Susan Maxwell (office management technology), M.A., *U. of Kentucky*; Zale Maxwell (industrial technology), M.Ed., *Ohio U.*; David D. Mowry (zoology), M.Ed., *Ohio U.*; Stephen Noltie (mathematics), Ph.D., *U. of California, Riverside*; Lorraine Ray (office management technology), M.Ed., *U. of Toledo*; William Stevens (electronics technology), Ph.D., *Ohio U.*; Jeffery Wagner (theater), M.F.A., *Ohio U.*; Larry Wilson (chemistry), Ph.D., *Ohio State U.*; Paul Yuckman (English), Ph.D., *Ohio U.*

Asst. Prof: Andrea Baker (sociology), Ph.D., *Case Western Reserve U.*; David Collopy (computer science technology), M.S., *Ohio U.*; John Faulkner (English), Ph.D., *Rutgers U.*; Kenneth Heineman (history), Ph.D., *U. of Pittsburgh*; Jane Johnsen (education), Ph.D., *Ohio State U.*; Gary Lockwood (engineering), M.S., *Ohio State U.*; Stephen Stevning (business management technology), M.B.A., *Ohio State U.*

Instr: Kunle Akerele (business management technology), M.B.A., *Xavier U.*; Dee Anderson (English), B.A., *Ohio State U.*; Anton Chin (mathematics), M.S., *Ohio State U.*; John Clay (physical education), B.G.S., *Ohio U.*; Debbora Clegg (English), M.A., *Ohio State U.*; Harvey Click (English), M.A., *Ohio State U.*; Anthony Davenport (art), M.F.A., *SUNY, New Paltz*; Dennis Donohue (mathematics), M.A., *U. of California*; Gerald Dragoo (computer science technology), B.A., *California U.*; Joan Gilchrist (business), M.B.A., *Ohio U.*; John Harris (real estate), B.S., *Western Kentucky U.*; Diane King (accounting technology), M.B.A., *Ohio State U.*; Larry McElwee (classical languages), Ph.D., *SUNY, Albany*; Gisela Meckstroth (office management technology), M.A., *Ohio State U.*; Keith Nyland (history), Ph.D., *Ohio State U.*; Hasso Opitz (Spanish), M.A., *Ohio State U.*; James Polt (psychology), Ph.D., *U. of Chicago*; Jan Ross (business management technology), M.Ed., *Ohio U.*; Gitta Sadoni (German), M.A., *Ohio U.*; Doreen Sanzone (accounting technology), M.B.A., *New York U. Graduate School of Business Administration*; Robert Trocchia (music), B.Ed., *Ohio U.*; Gertrude Young (music), M.A., *Ohio U.*; Paul Young (music), Ph.D., *Ohio U.*; John Zimmerman (mathematics), M.A., *Bowling Green State U.*

Zanesville Campus

Prof: John J. Arnold (philosophy), J.D., *Capital U.*, Ph.D., *Hartford Seminary Foundation*; James E. Jordan (political science), Ph.D., *U. of Michigan.*

Assoc. Prof: John W. Benson (zoology), Ph.D., *Michigan State U.*; Melissa Bixler (physical education), Ph.D., *Ohio State U.*; Thomas L. Bixler (physical education), M.Ed., *Ohio U.*; George Brooks (zoology), Ed.D., *Ball State U.*; Richard J. Brumbaugh (chemistry), Ph.D., *Ohio U.*; Judith A. Davis (nursing), M.S., *Ohio State U.*; Marcia Herman (music), M.F.A., *Ohio U.*; John R. Kelbley (English), M.A., *Ohio U.*; Michael J. Kline (history), M.A., *Ohio U.*; Robert A. Rider (mathematics), M.A., *Bowling Green State U.*; Mark A. Shatz (psychology), Ph.D., *U. of Florida*; Parinbam K. Thamburaj (chemistry), Ph.D., *Kent State U.*; George L. Ware III (English), M.A., *Ohio U.*

Asst. Prof: Billie Dudley (mathematics), M.A.T., *Indiana U.*; Mary Ann Goetz (nursing), M.S., *U. of Maryland*; Deborah E. Henderson (nursing), M.S., *Ohio State U.*; James W. Hoefler (economics), M.A., *Ohio U.*; Linda L. Hunt (nursing), Ph.D., *Ohio U.*; Craig D. Laubenthal (dean, education), Ph.D., *Michigan State U.*; Barbara K. Montgomery (nursing), M.S.N., *U. of South Alabama*; Mike Nern (English), M.A., *Ohio U.*; Barbara L. Schilling (nursing), M.S.N., *Ohio State U.*; Vicki L. Sharrer (nursing), M.S.N., *Ohio State U.*; Sheida Shirvani (interpersonal communication), Ph.D., *North Texas State U.*; Louis W. Smith (mathematics; part-time), M.A., *Louisiana State U.*; Reed W. Smith (radio/TV), Ph.D., *Ohio U.*

Instr: Marilyn Baker (mathematics), M.A.T., *Vanderbilt U.*; Ashley E. Bannon (sociology; part-time), Ph.D., *Ohio State U.*; Beverly Bell (education), M.E.D., *Ohio U.*; Karen Brown (modern languages; part-time), M.A., *U. of Wisconsin*; Richard Bradshaw (history), Ph.D., *Ohio U.*; Sally Fusner (nursing), M.S., *Ohio State U.*; Dee Ann Gehlauf (psychology), Ph.D., *Ohio U.*; Gloria Heine (computer science), B.S., *Ohio U.*; Susan Hoag (nursing; part-time), B.S.N., *Vanderbilt U.*; Cheryl Hull (nursing), B.S.N., *OhioU.*; Rick Shriver (radio/TV), M.A., *Ohio U.*; Alta Sims (humanities; part-time), M.A., *Kent State U.*; Sharon Staib (nursing; part-time), B.S.N., *Walsh College*; Thomas B. Stevenson (anthropology; part-time), Ph.D., *Wayne State U.*; Cynthia Tuck (nursing), B.S.N., *Columbia U.*

Ohio University

Graduate Admissions Application for U.S. Citizens

(Please type or print legibly using black ink)

Do not write in this space App. fee ______		
Res.	**M**	**PM**

Please complete and return TWO copies of this application, along with a fee of $25 for application to a graduate degree program, $15 for nondegree and transient status, or $10 for nondegree to degree status or application to a second Ohio University graduate degree program. Mail to the Office of Graduate Student Services, Ohio University, Athens OH 45701-2979. Make check or money order payable to "Ohio University." Application fee is nonrefundable.

1. Personal Information

Name ______________________ Social security number ______________
LAST FIRST MIDDLE

Former last name(s), if any ______________________ Male ___ Female ___ Single ___ Married ___

Permanent address ______________________
NUMBER STREET

____
CITY STATE ZIP

County (if Ohio) ______________ Telephone: ______________
AREA CODE NUMBER

Mailing address (if different from above) ______________________
NUMBER STREET

______________________ Telephone: ______________
CITY STATE ZIP

Date of birth ______________ Place of birth ______________ Citizenship ______________
MONTH DAY YEAR CITY STATE

How would you describe your ethnic background? (*answer is optional; please check only one.)*

___ (01) American Indian or Alaskan native; ___ (03) Oriental American; ___ (05) Caucasian/White not of Hispanic origin;
___ (02) Afro-American/Black/Negro not of Hispanic origin; ___ (04) Hispanic;

In which U.S. state were you a legal resident during the past 12 months? ______________________

2. Academic Information

When do you wish to enter Ohio University?

Fall Quarter
__ September ____ YEAR

Winter Quarter
__ January ____ YEAR

Spring Quarter
__ March ____ YEAR

Summer Quarter
__ First Term ________
__ Second Term ________

Indicate which Ohio University campus you wish to attend.

___ Athens
___ Belmont (1)
___ Chillicothe (2)
___ Ironton (3)
___ Lancaster (4)
___ Zanesville (6)
___ Portsmouth Resident Credit Center (15)

What will be your graduate major? (Refer to Graduate Programs section of *Graduate Catalog)* ______________________

______________________ Area of specialization? ______________________

What degree will you work toward at Ohio University?

___ Master's
___ Ph.D.
___ Nondegree
___ Transient
___ Workshop (give title) ______________
____

Status: ___ Full-time
___ Part-time

List all colleges or universities you've attended (begin with the earliest attended):

Name of institution	Location (city, state)	Dates attended	Major area of study	Degree (Give date received/expected)

NOTE: Please arrange for each school attended to send TWO separate sets of transcripts to the Office of Graduate Student Services, Ohio University, Athens OH 45701-2979. Transcripts should be sent at once. *Transcripts for Ohio University students seeking admission to a graduate program will be obtained directly by the Office of Graduate Student Services.*

(Please complete both sides of form)

Have you taken graduate courses at Ohio University? Yes ____ No ____ When? ______________________________

Which campus? ______________________________ Did you earn a degree? Yes ____ No ____ Date earned ______

3. Additional Information

Honors or scholarship recognition: ______________________________

Teaching or research experience (Describe position held, dates, and location):

Nonacademic work experience (Describe position held, dates, and location):

Professional or vocational plans: ______________________________

Are you presently a full-time contract employee of Ohio University? Yes ____ No ____

Current occupation ______________ Date hired __________ City ______________ State ________

4. Recommendation Information

Please have three individuals complete the enclosed recommendations. Since forms must be sent directly to the graduate chair of the department or school to which you are applying, we suggest that you provide each individual with a stamped envelope addressed to the specific department or school. Please list the people who will be submitting recommendations on your behalf:

1. ______________________________
2. ______________________________
3. ______________________________

You will be informed by the department or school to which you apply of any additional supporting materials required.

Ohio University complies with nondiscrimination laws including Title VI of the Civil Rights Act and Title IX of the Education Amendments of 1972.

I certify that the information given in this application is complete and accurate.

Signature ______________________________

Date of submitting application ______________

5. Living Arrangements:

Any correspondence concerning housing should be directed to the
Director of Housing, Chubb Hall, Ohio University, Athens OH 45701-2979.

Application for Financial Assistance

TYPE OF APPOINTMENT (Complete if you wish to apply for financial assistance — check one or indicate preference by number)

1. __ Graduate associate in ______________________________
2. __ Graduate staff associate in ______________________________
3. __ Graduate research associate in ______________________________
4. __ Graduate teaching associate in major field ______________________________
5. __ Scholarship (must carry minimum of 15 graduate credit hours) ______________________________

Contact the department or school of your interest for further information on types of appointments available.

(Please complete both sides of form)

Ohio University

Graduate Admissions Application for U.S. Citizens

(Please type or print legibly using black ink)

Do not write in this space App. fee ______________		
Res.	**M**	**PM**

Please complete and return TWO copies of this application, along with a fee of $25 for application to a graduate degree program, $15 for nondegree and transient status, or $10 for nondegree to degree status or application to a second Ohio University graduate degree program. Mail to the Office of Graduate Student Services, Ohio University, Athens OH 45701-2979. Make check or money order payable to "Ohio University." Application fee is nonrefundable.

1. Personal Information

Name ______________________________ (LAST / FIRST / MIDDLE) Social security number ______________

Former last name(s), if any ______________________ Male ___ Female ___ Single ___ Married ___

Permanent address ______________________________ (NUMBER / STREET)

______________________________ (CITY / STATE / ZIP)

County (if Ohio) ______________________ Telephone: ______________________ (AREA CODE / NUMBER)

Mailing address (if different from above) ______________________________ (NUMBER / STREET)

______________________________ (CITY / STATE / ZIP) Telephone: ______________

Date of birth ______________ (MONTH DAY YEAR) Place of birth ______________________ (CITY / STATE) Citizenship ______________

How would you describe your ethnic background? (*answer is optional; please check only one.*)

___ (01) American Indian or Alaskan native; ___ (03) Oriental American; ___ (05) Caucasian/White not of Hispanic origin;

___ (02) Afro-American/Black/Negro not of Hispanic origin; ___ (04) Hispanic;

In which U.S. state were you a legal resident during the past 12 months? ______________________

2. Academic Information

When do you wish to enter Ohio University?

Fall Quarter	Winter Quarter	Spring Quarter	Summer Quarter
__ September ____ YEAR	__ January ____ YEAR	__ March _____ YEAR	__ First Term _________
			__ Second Term _______

Indicate which Ohio University campus you wish to attend.

___ Athens
___ Belmont (1)
___ Chillicothe (2)
___ Ironton (3)
___ Lancaster (4)
___ Zanesville (6)
___ Portsmouth Resident Credit Center (15)

What will be your graduate major? (Refer to Graduate Programs section of *Graduate Catalog*) ______________________

______________________ Area of specialization? ______________________

What degree will you work toward at Ohio University?

___ Master's
___ Ph.D.
___ Nondegree
___ Transient
___ Workshop (give title) ______________________

Status: ___ Full-time
___ Part-time

List all colleges or universities you've attended (begin with the earliest attended):

Name of institution	Location (city, state)	Dates attended	Major area of study	Degree (Give date received/expected)

NOTE: Please arrange for each school attended to send **TWO** separate sets of transcripts to the Office of Graduate Student Services, Ohio University, Athens OH 45701-2979. Transcripts should be sent at once. *Transcripts for Ohio University students seeking admission to a graduate program will be obtained directly by the Office of Graduate Student Services.*

(Please complete both sides of form)

Have you taken graduate courses at Ohio University? Yes ____ No ____ When? ______________________

Which campus? ______________________ Did you earn a degree? Yes ____ No ____ Date earned ______

3. Additional Information

Honors or scholarship recognition :______________________

____

____

____

Teaching or research experience (Describe position held, dates, and location):

____

____

____

____

Nonacademic work experience (Describe position held, dates, and location):

____

____

____

____

Professional or vocational plans: ______________________
Are you presently a full-time contract employee of Ohio University? Yes ____ No ____

Current occupation ______________ Date hired ________ City ______________ State ________

4. Recommendation Information

Please have three individuals complete the enclosed recommendations. Since forms must be sent directly to the graduate chair of the department or school to which you are applying, we suggest that you provide each individual with a stamped envelope addressed to the specific department or school. Please list the people who will be submitting recommendations on your behalf:

1. ______________________
2. ______________________
3. ______________________

You will be informed by the department or school to which you apply of any additional supporting materials required.

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I certify that the information given in this application is complete and accurate.

Signature ______________________

Date of submitting application ______________

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TYPE OF APPOINTMENT (Complete if you wish to apply for financial assistance — check one or indicate preference by number)

1. __ Graduate associate in ______________________
2. __ Graduate staff associate in ______________________
3. __ Graduate research associate in ______________________
4. __ Graduate teaching associate in major field ______________________
5. __ Scholarship (must carry minimum of 15 graduate credit hours) ______________________

Contact the department or school of your interest for further information on types of appointments available.

(Please complete both sides of form)

Ohio University

Recommendation for Graduate Admission

Mail to: Graduate Chair, Dept. or School________________________, Ohio University, Athens OH 45701-2979

Graduate Applicant:

In the spaces below, please fill in your name and the department or school to which you are applying. Also complete the recommendation review section. Then give one of these forms to each of three people who will be providing a recommendation for you. Have them return this form directly to the graduate chair of the department or school to which you are applying.

Person Submitting Recommendation:

____________________________________ has applied for admission to Ohio University's ______________________________.

In the space below, please state your professional relationship to the applicant, and provide information about his or her scholarly achievement, fitness for graduate study, personal qualities, character, and other information that you consider pertinent (use additional paper, if necessary). **Please return this form to the graduate chair of the department or school indicated.**

Please print name__________________________________ Position ____

Signature ______________________________________ Institution____

Date ____ Address____

Recommendation Review:

In compliance with Ohio University policy and with the Family Educational Rights and Privacy Act of 1974, the contents of this recommendation may be reviewed by the student if both parties give their consent.

I (student) request that this recommendation be:
____ Confidential (open only to the academic personnel)
____ Open (I may review)

____
Student's Signature

____ I agree
____ I do not agree to the above designation.

____
Signature of Person Providing Recommendation

Ohio University

Recommendation for Graduate Admission

Mail to: Graduate Chair, Dept. or School________________________, Ohio University, Athens OH 45701-2979

Graduate Applicant:

In the spaces below, please fill in your name and the department or school to which you are applying. Also complete the recommendation review section. Then give one of these forms to each of three people who will be providing a recommendation for you. Have them return this form directly to the graduate chair of the department or school to which you are applying.

Person Submitting Recommendation:

____________________________________ has applied for admission to Ohio University's _______________________________.

In the space below, please state your professional relationship to the applicant, and provide information about his or her scholarly achievement, fitness for graduate study, personal qualities, character, and other information that you consider pertinent (use additional paper, if necessary). **Please return this form to the graduate chair of the department or school indicated.**

Please print name__________________________________ Position ____

Signature ____ Institution____

Date ____ Address____

Recommendation Review:

In compliance with Ohio University policy and with the Family Educational Rights and Privacy Act of 1974, the contents of this recommendation may be reviewed by the student if both parties give their consent.

I (student) request that this recommendation be:

___ Confidential (open only to the academic personnel)

___ Open (I may review)

____

Student's Signature

___ I agree

___ I do not agree to the above designation.

____

Signature of Person Providing Recommendation

Ohio University

Recommendation for Graduate Admission

Mail to: Graduate Chair, Dept. or School________________________, Ohio University, Athens OH 45701-2979

Graduate Applicant:

In the spaces below, please fill in your name and the department or school to which you are applying. Also complete the recommendation review section. Then give one of these forms to each of three people who will be providing a recommendation for you. Have them return this form directly to the graduate chair of the department or school to which you are applying.

Person Submitting Recommendation:

____________________________________ has applied for admission to Ohio University's ______________________________.

In the space below, please state your professional relationship to the applicant, and provide information about his or her scholarly achievement, fitness for graduate study, personal qualities, character, and other information that you consider pertinent (use additional paper, if necessary). **Please return this form to the graduate chair of the department or school indicated.**

Please print name________________________________

Signature ________________________________

Date ________________________________

Position ________________________________

Institution________________________________

Address________________________________

Recommendation Review:

In compliance with Ohio University policy and with the Family Educational Rights and Privacy Act of 1974, the contents of this recommendation may be reviewed by the student if both parties give their consent.

I (student) request that this recommendation be:

___ Confidential (open only to the academic personnel)

___ Open (I may review)

____

Student's Signature

___ I agree

___ I do not agree to the above designation.

____

Signature of Person Providing Recommendation

Notification Card

Ohio University   Athens OH 45701-2979

Please fill in the front of this card with your name and mailing address. Return the card in an envelope with your completed application form to the Office of Graduate Student Services, Ohio University, Athens, Ohio 45701-2979.
It will be used to notify you of receipt of your application materials.

______ We have received your application and fee for admission.

______ We have received your application for admission but the $25 application fee was not enclosed.

Place
Stamp
Here

University Administration

• Administrative Officers

President of the University	Robert Glidden, Ph.D.
Assistant to the President	Alan H. Geiger, Ph.D.
Executive Assistant to the President for Affirmative Action	William Y. Smith, J.D.
Provost	J. David Stewart, Ph.D.
Vice Provost for Regional Higher Education	James C. Bryant, Ph.D.
Vice President for Administration	Gary B. North, Ph.D.
Vice President for Development	Jack G. Ellis, B.S.
Vice President for University Relations	Adrie H. Nab, Ed.M.
Dean of Students	Joel S. Rudy, M.A.
Treasurer and Controller	William L. Kennard, B.S.

• Office of the Vice President for Research and Graduate Studies

Vice President for Research and Graduate Studies	T. Lloyd Chesnut, Ph.D.
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Graduate Student Services	
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